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ON THE COVER — MPC's beautiful old classic cars form the basis of this colorful gangland funeral procession. Check out page 30 for the complete story. Bob Schleicher shot this fascinating scene.

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July 1968/3



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HOC CI WORLD

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HOC CI (HO Competition Cars International)
P.O. Box 578
Times Square Station
New York, N.Y. 10036

If the enthusiasm of one man is any indication of the future success of a plan, then that shown by this magazine's HO reporter, Dennis Elliott, assures us that HOC CI's latest move to provide regional racing on a national level is assured.

Dennis, who must rank with those real hardcore enthusiasts of the HO scene, has been working with HOC CI recently, and on his own prior to that, trying to get this racing program off the ground. A member of his own very active club in Texas, and a long time HOC CI member, Dennis was recently appointed by HOC CI as its Regional Director in his own state.

Another recent appointment is that of Kim Shaw of Indiana who will act as our director for that state. Other members are being notified as this is being written in order to establish a national network of working directors to insure that a racing program will be in the hands of capable people in every state where a race program will take place.

So then, HOC CI members in the Texas area, your new Regional Director is Dennis Elliott, 1137 Sierra Drive, Pampa, Texas 79065, and those of you living in Indiana, your man is Kim Shaw, 904 N. 16th Street, Elwood, Indiana 46036.

Now, as to the start of a racing program. Because at this time it seems for many reasons highly impracticable to organize a racing program along the lines that are used by the racers in larger scales, all HOC CI events will have to be mail-in events. The first one held some time ago in New Jersey proved that it can be done and with success. The racing calendar will consist of six bi-monthly mail-in events, all of them road races. One each in Feb., Apr., June, Aug., Oct., and Dec. This year, being well along already, we will go for three events, and they are as follows: August, The Hobby House, 803 Louisville, Monroe, La. 71201;

The official voice of H.O. racing

October, S.I.R. c/o Spartan Racing Team, 1137 Sierra Drive, Pampa, Texas 79065; December, Mini-Wheels Family Hobby Center, 714 Raritan Ave. Highland Park, N.J. To avoid confusion, all entries must be sent to HOC CI-NAMRA, P.O. Box 578, Times Square Station, New York City, N.Y. 10036. The next issue of this magazine will bring you all the other final details you must have to enter. One final word however, since these races will all be HOC CI sanctioned, they will be run according to HOC CI rules *only*. And we will insure that a HOC CI Director is at each race site to insure this.

At this time, we are hoping that we will be able to tell you of the participation in these events of all of the leading manufacturers of H.O. equipment. All entries will be running for the Overall National Championship, with individual awards for different classes.

If we can make this '68 season a success, *and we can with your help*, then the full '69 season will go all the way with drag meets and a new land speed record run. Start getting those tiny racers ready.

The facts concerning a new edition of the HOC CI rule book are these. HOC CI is not satisfied with the present rule book as it stands today. Developments in the HO world have been such recently to warrant many minor and several major changes. We have already asked for suggestions from our active members that we may evaluate these. The response so far has been less than helpful. And those who do not at this time contribute anything will be the ones who, upon receipt of a new book, cry that their own pet theories were not incorporated. The new book will not be out this season, there being still too much to consider and test. But a new one is coming and it may well be a stiffer set of rules than anyone expected.

One of the biggest controversies now going on regarding rule changes is whether or not to abolish the stock division. That, is one big tough issue to handle without the opinions of at least a cross-section of our members. So far it would seem that our very active members (those who race with teams

and or clubs) are all for doing away with the stockers. Their argument is that no one races out of the box today and wins, and to modify does not really take any special engineering talent or large sums of money. One of their best arguments to date, the one that seems to carry more weight than most, is the fact that the very people who are against modified are the first to discard the stock wheels and tires and replace them with one of several super wheel and tire combos. And they hasten to point out (and rightfully so) that even this constitutes "modified" by HOC CI rules.

On the other side of the fence, those who choose to retain the stock class complain bitterly about the high cost of modified racing and the underlying fear of that big unknown—*rewinding*.

HOC CI today knows that so far all figures indicate that the stockers are superior in number. We also know that those who actively participate in programs anywhere are the modified. HOC CI's own rule book states that its purpose is to further the sport of international H.O. racing. And the key word there, is RACING. HOC CI is also well aware that the sport of racing cars, be they big 1:1 GP machinery, go-karts or H.O. cars, is an expensive sport. We doubt the cost of preparing a H.O. car will ever send any of our members to the poor house, and wonder if perhaps it would not be more worthwhile to have a few race ready cars than to boast of a thirty five car stable. After all, figure it out, *35 cars has to be close to a \$100 investment right there!*

HOC CI as yet has not made a decision—it will have to. Do we abolish the stock division, or retain the divisions as we now know them, stock or modified? If the former, we may see some hotter competition overall, if the latter, continued hard work for the race programmer. But still, no reason for lack of competition.

If you are a HOC CI member, and if you ever do anything more than race your little car parallel to an H.O. train at Christmas time, please drop us a line with your views. We are not mind readers, and we want to get on with it.



BIG MAMIE never lost a man

A lot of men loved "Big Mamie." And she never lost a lover. Officially, she was known as the Battleship USS Massachusetts, but her men gave her the affectionate nickname. They started World War II together with the first salvos in North Africa, and ended it together with the last salvos in the Pacific. They fought 35 sea battles without a fatality. Revell now has a model of the USS Massachusetts, for under \$1.00. She'll be interesting to build, but be careful. You might fall in love. "Big Mamie" would be a good ship to launch a collection of Revell models. You could also include cars, motorcycles, airplanes, space craft and sailing ships. For a complete catalog of 250 Revell models, send 25c to: Revell, Inc., 4211 Glencoe Avenue, Venice, Calif. 90291.



Model of the Month



model mail



THESE FELLAS WANT TO RACE

After reading your great mag for about 3 months, I thought perhaps you could help us get a little more fun out of our club competition. We race strictly HO scale cars, and are willing to travel short distances on weekends. We would also be honored to have a club race against us, on one of our tracks. Any one in the Elmira-Corning area wishing to race, please contact me. Thank you.

Ned Griffith
47 Fairview Hill
Addison, N.Y. 14801
Ph: 359-3374

We're printing your full address and phone number, Ned, in case some one out there wants to get in touch with you. Club racing is an absolute ball. We're also registering you in our club directory. And you other fellas out there can fill in our club questionnaire and send it in to us too. We'll be delighted to publish the name and address of your club. Check page 70. Your club can attract new members if you take advantage of this free advertisement, courtesy MC&S. Do it NOW!

KEEN GUY DANNY

I can help Larry Janssen with his problem. (May, 1968 MC&S, page 6 - Ed.) Instead of using a plastic adhesive, use white glue, such as Elmer's. If you get any on the clear plastic part, wipe it off while it's still wet, and if there is still some sticky film left, wipe it off with a little water. It's really easy, but you must wait quite a while for a secure bond with the plastic. Keep up the "Detail For Real" section, because it's a real help.

I'm interested in starting a static model car club. Could you give me some ideas as to how to go about it? For instance, how do you actually run the club meeting and activities, etc.? This will be a small club (15 members) but I plan to expand it later on. I would appreciate mail from other clubs too.

What happened to your "Model Of The Month" contest in the May issue? A lot of us guys get ideas from that, and I sure missed it!

Danny Coggins
2126 Haultain Ave.
Saskatoon, Sask., Canada

First, thanks for the tip on the glue problem, Danny. Our readers constantly come up with good ideas that other fellas can benefit from. We'll have an article on how to go about starting a club in the next issue. Watch for it. The "Model Of The Month" article got pushed out at the last minute in the May issue, due to space problems. And have we ever heard from our readers because of that! Sorry, fellas, never again. To compensate somewhat, we're giving you six pages worth this month.

WHERE TO BUY CARS

I have just finished reading your April MC&S. The King Cobra really turned me on! Where can I buy the model? I hate to send away for one. Can you tell me where to buy one locally?

Clifford Thompson, Jr.
South Bend, Ind.

Thanks for the compliment on the King Cobra article, Cliff. There's a lot of articles scheduled soon on the real car, and how to build a model replica. We don't have a local address for you, but you can buy the kit from Auto World, or Discount Hobbies, simply by sending for their catalogs. They both advertise in this issue, so check it out. There two companies have everything you want.

WANTS PAINTED HO SPECTATORS

Your mag is cool beyond words. I have an HO track. It's a nice track, except it needs spectators to give it life. Could you please tell me where I can buy these?

Robert Maloney
South Plainfield, N.J.

The Fred Bronner Corporation (importers of the MATCHBOX cars) are now the exclusive U.S. importer for Merten Figures.

They're handsome as can be, and should add a lot of class to any HO layout.

THIS CHAP HAS A REAL PROBLEM

What can you do with your models to protect them from destruction due to the hands of little brothers?

H. W. Gaddis
San Antonio, Tex.

Absolutely nothing, H. W., sad as that seems, short of locking them in a vault!

ANOTHER FREE TIP

To add a good deal of realism to stock-type air cleaners, choose a drill small enough to drill out most of the center portion of the intake tube, but leave the outside edge intact. I use this method and it really looks great.

M. May
Andrews, Tex.

WANTS NAMRA'S ADDRESS

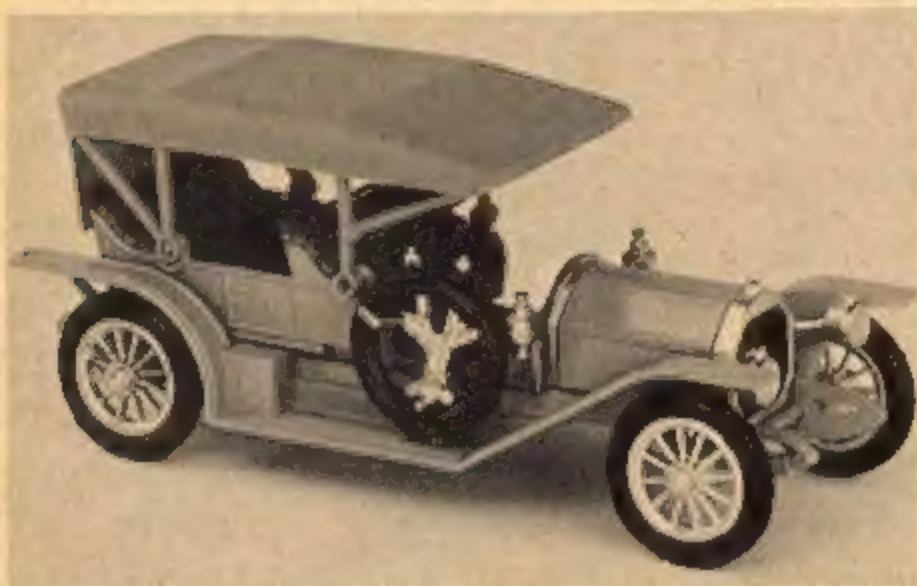
How do I go about joining NAMRA? I definitely feel that organized club racing is the only way to really have fun with slot cars. I

race by myself, or with a friend once in a while, but it gets pretty boring. If club competition is as exciting as you say it is, I'd like to take a whack at it.

Fred Elso
Birmingham, Ala.

Check this issue (page 52) for a full NAMRA report, Fred. You'll find the address in the article. And you're so right, club racing is the only way to fly. That's why you'll want to read our special "How To Start A Club" article, in next month's MC&S. Don't miss it!

NEW PRODUCTS



Another great car from MATCHBOX is the 1912 Simplex, No. Y-9, with a green body, red seats and a tan top. The trim is simulated brass. It is taken from an original Simplex No. 50 (as made in New York) with a Holbrook toy tonneau body and now on display at the Long Island Automotive Museum. Detail includes brake and gear ratchets, tool and battery boxes, and a detailed instrument panel. Even the valve stem caps are shown on the rim of the artillery wheels. Watch for it on your dealer's shelves.

Go HO racing with Tyco's new cars. A '30 Hot Rod Roadster with chromed radiator and exhaust pipes, chromed wheels, hand painted driver, and stainless steel roll bar, for \$3.49. Also, a '68 Corvette Coupe, featuring chrome bumpers, wheels and windshield detail. \$3.49 each. At your dealers now, or on their way.

The biggest model airplane of all is coming soon from Monogram! This 1/72 scale B-52 Stratofortress has a wing span of over 30" and a fuselage length of more than 26". Over 250 separate parts and many working features including a realistic jet sound, movable rear turret, operating flaps and bomb bay doors and wing spoilers, and retractable landing gear, make this model one of the most fascinating of all time. The price is \$15.00, but it promises to be worth every cent! Available very soon at your local dealer.



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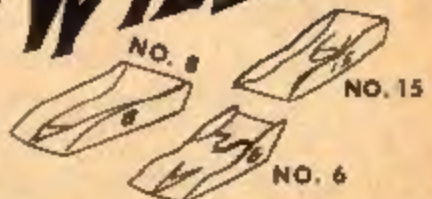
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THE LAUNCH PAD



By Michael Poss
THE NATIONAL SCENE

With summer in the air, model rocketeers all over the nation are making plans to attend the National Association of Rocketry's annual national competition meet. NARAM-10, the Tenth United States Model Rocket Championships, will be held on August 19-23, 1968, at NASA's Wallops Station, Wallops Island, Virginia. A full-size rocket base since 1945, Wallops also hosted NARAM-6 in 1964 with great success. This year's competition promises to be the best yet in that it will represent a decade of organized model rocketry in action.

One hundred selected NAR members will be competing for awards in the following events: Scale, Class 2 Scale Altitude, Space Systems, Sparrow and Hawk Boost-Glide Duration, Class 1 Parachute Duration, Egg Loft, Open Spot Landing, and Research & Development. With the relatively new 1967 NAR Sporting Code in effect, several of these events will be held for the first time at a NARAM. The results should be very interesting, especially in the Egg Loft event. One scrambled egg—coming down! Unlike previous NARAM's, the '68 Championships will not have a Payload Altitude event. It was a real hassle to track those birds last year. More emphasis is being put on scale events, while trying for top performance without using the largest engine possible is finally making sense to most rocketeers. If you can't track or retrieve it, you can't win—right?

Even if you aren't a NAR member (see May '68 MC&S for membership info), you can still attend the meet and see for yourself what the top rocketeers in the U.S. are doing. As for myself, I plan on being there not only to compete, but to

cover the meet for MC&S. I'll present a written and pictorial report of the NARAM-10 happening as soon as possible afterwards.

STRONGER GLUE?

Believe it or not, there is a fast-drying adhesive that is superior to white glue. It's called Titebond and is available at hobby shops, or from Centuri (GL-100). The stuff is just perfect for use in model rocketry and does a fantastic job of holding balsa to balsa or almost anything else together. Setting and drying time for Titebond is well below that of white glue and yet it is notably stronger. That's because Titebond is an aliphatic resin of some sort. It takes dope as well as enamel covering without a loss of strength. I've had very good results with this glue and think it's the best you can get. It sure keeps a B/G together. One thing though, for you perfectionist-type modelers: Don't let Titebond stay on a body tube where it shouldn't be. When you wipe it off, you'll probably get a small "smear" on the tube which can show up even under several coats of paint. And remember, it sets very quickly.

FIN STRENGTH

When using balsa wood, no doubt you have noticed the grain pattern of the material. It is important that this be taken into consideration when making balsa fins for your models. For more structural strength, the grain of the balsa must run in the same direction or parallel to the leading edge of each fin. That's the leading edge, not the root edge. If the grain is running straight up-and-down and parallel with the fin root edge, you have made a very weak

fin as a result. It will most likely be broken on its first landing because it can't take the shock of impact. So be careful when tracing fin patterns onto balsa fin material. Align the grain with the leading edge. It makes for a stronger if not better model.

Stronger fins can also be obtained by using a material other than balsa. If you've ever heard of 1/32" or 1/16" thick sheet plywood you know what I mean. I was introduced to it last year and have been using it ever since, especially for altitude model fins and boost-glider rudders. In substituting 1/32" ply for 1/32" or 1/16" balsa or 1/16" ply for 3/32" or 1/8" balsa, the difference in weight is negligible while the comparative strength is something else! SIG brand birch plywood should be available at most hobby shops that handle model airplane or R/C supplies and is excellent for use as fin material. Although 1/32" ply can be used to make the thinnest practical model rocket fins, it has a tendency to warp: Suggestion: select the flattest piece on hand when buying, and store in a thick book in a warm and dry place. By the way, you really don't have to worry about grain alignment with plywood, but go ahead and arrange it properly anyway.

FLIGHT PERFORMANCE REPORTS

If you are a serious rocketeer, I'm sure that by now you are aware of the great advantage of knowing how your models will perform before you fly them. Competition modelers realize this especially. At the present there are several technical reports available to the model rocketeer that can be of tremendous value in predicting performance.

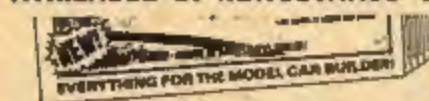
Estes Industries led the way with Doug Malewicki's "Altitude Prediction Charts" (TR-10) released in 1967. At NARAM-9 last summer, Doug supplemented TR-10 with charts for the Centuri Mini-Max and Flight Systems series engines. And at NARAM-8 in 1966, the Barrowman Method for calculating the C.P. (center of pressure) of a model rocket was introduced with its simplified equations.

And still more progress has been made. Now Centuri Engineering has released a series of valuable Technical Information Reports. TIR-30, "Stability of A Model Rocket in Flight," gives you a very clear understanding of the principles involved in model stability. TIR-33, "Calculating the Center of Pressure of A

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continued from page 9

Model Rocket," is written primarily for the performance-conscious rocketeer and enables you to calculate the exact center of pressure of a model rocket. Both of these TIR's were written by Mr. James Barrowman of NASA's Goddard Space Flight Center and represent the ultimate in pre-flight stability prediction thus far. The third masterpiece, "Model Rocket Altitude Performance" (TIR-100), is a real time-saver. Doug Malewicki did a beautiful job on this one in that there is no math involved in finding altitudes or engine delay times. You read total altitudes directly from the graphs. And for 1/4A thru F type engines even! Predicting peak altitudes with aerodynamic drag already taken into consideration is now a real cinch. Model design and engine characteristics are also discussed in the report.

All of these technical reports are of definite importance in increasing your overall knowledge of model rocketry. With the material available now, there's no reason why model rocketeers can't design and build stable high-performance birds all the time. What next?

MANUFACTURERS

Here's a list of United States manufacturers of model rocketry supplies. For those of you who wish to take advantage of the models and accessories sold by these firms, a request for a catalog or price list to each should secure the information you need. Also, sending 25¢ with your letter will cover all costs for material sent to you.

Companies are listed in alphabetical order:

Central Rocket Company
Dept. MCS
P.O. Box 89
Waupaca, Wisconsin 54981

Centuri Engineering Co.
Dept. MCS
P.O. Box 1988, Dept. L
Phoenix, Arizona 85001

Estes Industries, Inc.
Dept. MCS
P.O. Box 227, Dept. 43
Penrose, Colorado 81240

Flight Systems, Inc.
Dept. MCS
Box 145
Louisville, Colorado 80027

Model Rocket Industries
Dept. MCS
309 State Street
Madison, Wisconsin 53703

Rocket Development Corporation
Dept. MCS
Route 3
Seymour, Indiana 47274

Rocket Supply Co.
Dept. MCS
Box 51
Tappan, New York 10983

Saturn Spacecraft Co.
Dept. MCS
2102 W. Village Dr.
Phoenix, Arizona 85023



A combination trailer/display case in 1/25 scale is offered by MPC. Called the "Super Trailer," it features detachable loading ramps, trailer hitch, trailer bed, tool compartment, four wheels and opening rear doors. The sides, top and doors are in clear plastic. It will hold all 1/32 and most 1/25 scale models. The tool compartment houses a compressor, grease barrel, oil and gas cans, and a fire extinguisher. The compartment fits on the front of the trailer. Retail for \$1.50. It's a beauty. Watch for it.

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#5002 1/32 Scale Includes inline chassis & SP-90 type Motor	0.40—1.40	
#5001 1/24 Scale inline chassis w drop arm, 30 Motor and replacement armature	0.90—1.40	
UNIVERSAL ELECTRIC LAP COUNTER		
2-4000 units—may be combined for any number of laps	0.85—3.00	

DND EXCLUSIVE SPECIALS!

	DND Price
#2003 5% 160 Double output 1988 hand-picked Mabuchi	\$2.50
#2004 5% 240 Double output 1988 hand-picked Mabuchi	2.50
#2005 160 Newtound and balanced Silver armature (specify wire size)	3.00
#2006 260 Newtound and balanced Silver armature (specify wire size)	3.00
#2007 160 Newtound kit w/brushes & springs, pole's, super magnets, can, endbell, choice of Silver wire size (enough wire for 2 armatures)	4.95
#2008 160 Super magnets	1.75



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THE SECOND MC&S/USRA RACE



Photos by Al Holt

And sidewinders took first through fourth place! Here we go again!

By Gene Hastings

Sidewinders 1st, 2nd, 3rd, and 4th in qualifying! Sidewinders - 1st, 2nd, 3rd, and 4th in the main event. Sidewinders are the latest. It's what's happening. If you're not running one you could be going faster. Where did it all start? How did it all happen? Who knows, exactly? The first sidewinders I remember in road racing were the huge Pittman DC 85's. These were soon replaced by the Pittman DC 65's, and a few Tyco's. With the advent of the Pittman 196, inlines took over road racing. They didn't have as much power but their lower center of gravity made them handle much quicker through the turns.

When the Mabuchi came out, the scratch builders naturally mounted them inline. Some manufacturers of ready-to-runs, mounted the motors sideways, but they were not ideally geared and did not show too much promise.

Any successful drag racer can tell you that a sidewinder is the only method of power transfer for quick runs down the drag strip. Tom Rightmeyer, an accomplished drag racer,

decided to try his hand at building a Mabuchi SP 40 Sidewinder. I ground a set of Versatec magnets down to fit the small cam for him and he installed a double No. 29 Thorpe armature. The car was a rocket - down the straights

but he had to tip-toe around the corners. It weighed about 2 1/2 ounces - super light. When he added the weight to make it corner, it lost the punch and brakes. Everyone said it was interesting but not impressive.

The Midwesterners have been running Mabuchi sidewinders in 1/32 scale for years. By slanting the motor away from parallel to the rear axle they were even able to run larger 26D size cans in 1/32 scale. But reports from the NAMRA 500 invitational stated that their cars cornered well, but were too slow down the straights. Interesting. Why hadn't someone tried the 16D or 517 size can sidewinder in 1/24 scale? The consensus of opinion was that it couldn't possibly work. Too much weight in the back end. It would fishtail all around the track. That reminded me of Jerry Cowan's flipflop body mounts. Anybody could

tell that would never work! The body would raise and throw itself to the outside of the turn - naturally destabilizing the car. Everybody is using it now.

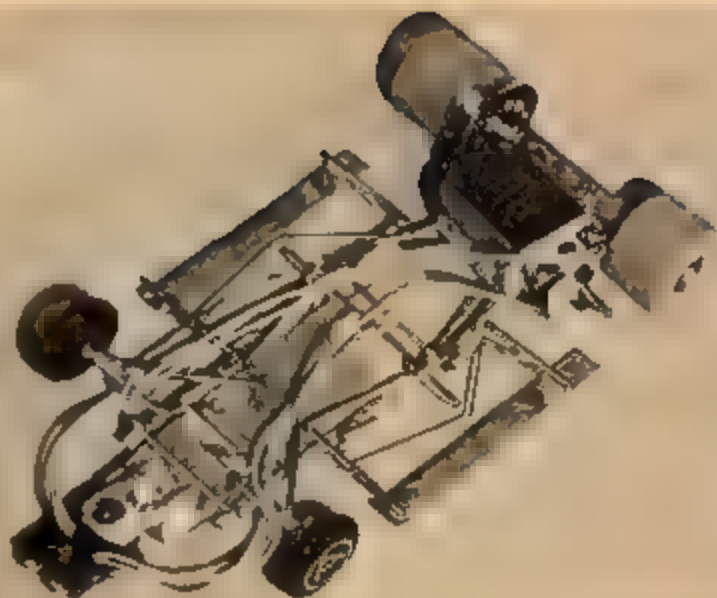
I decided to try a 16D sidewinder, even if it couldn't possibly work. I checked with Jim Gallagher, owner of J & J's, for the 64 pitch Weldon gears I needed. Sidewinder gears? He thought I was kidding. He hadn't kept the stock up because of no demand, but he said he would have them soon. The following week I had the car done but Jim forgot the gears. Instead of being geared 4 to 1 I was geared 3.28. Not even close! In spite of this I qualified for the race at 6.91 sec., comparable to Terry Schmid's track record of 6.84. Everybody looked at the car, said it was interesting but the only reason it went fast was because it had a rocket motor. I tried to tell them that it was because the car handled so well, but it was like talking to a brick wall.

The next week I built another sidewinder, with the correct gears, for J & J's. John Cukras came in without

his cars and I asked him if he wanted to drive the first car. It was being sent the following morning to Bruce Paschal in New Orleans and was geared for a 60 foot longer track. John drove it a few practice laps and said he would like to drive it. I qualified first turning 6.73 breaking Terry's record of 6.84! I also had the record on J & J's drag strip Terry's record of 6.84! I also had the record on J & J's drag strip at 0.93. I knew it was impossible to have both records at the same time — but it happened. Cukras qualified next and turned an identical 6.73 sec! Nobody else came within a quarter of a second of us! Before the race, Bryan Warmack told me if I won the race he was going to string me up. I'm not exactly known as a driving threat to these guys and the thought of the old man putting it to him was too much. Cukras, who could have won the race, ran into some bad racing luck and was unintentionally put on the floor 3 times by the guy next to him, putting him out of contention. My racing luck was a little better. I won the 1st heat, 2nd and 3rd heats and the race by 3½ laps. Unheard of! During the race, John Anderson, running 2 lanes next to me, called out "Hey, Gene, wait up. I want to race you." I told him "I am waiting John, what's holding you up?" This was too much. I now know how Parnelli Jones must have felt with the turbine at Indy last year. The sidewinder is like driving a dream. I didn't even have to push the car. I could cool it and still pass everybody.

And now enters the interesting part of the story — TIME! Just four days was the next big M.C. & S. U.S.R.A. G.T. race at Classic Raceways, 1853 Lincoln Blvd., Santa Monica, California. With all my pleading had I really convinced anyone to build sidewinders? The next night, Wednesday night, at Classic, John Cukras had built one, and was running his own sidewinder. He was the only one. John must have thought it was the way to go, because by Friday night he had built 5 of them, and they were all looking very good. By this time 3 other fellows had their own sidewinders. Things were looking up.

Jerry Brady, from the Cobra Team in New York, was there Friday night. I asked him if he had started on his sidewinder yet. He told me his KEAN motor would pull everybody 4 feet down the straights and his bat type car, that they were running in the New York area, was so fast in the corners that nobody would be able to keep up with him. I was obviously wasting my time so I just wished him good luck in the race. He was not yet convinced. Another surprise to me was that no one on the Checkpoint Team had built



The first successful 1/24 scale sidewinder car that started it all, Gene Hastings' original 16D-size sidewinder. Motor is soldered to rear end tubing and to piano wire frame. Armature can be easily replaced. Front axle is attached to drop arm, and outriggers and drop arm are all spring loaded. STP on the Weldun gears keeps the wear down to a minimum.



1st place in the main event and 4th quickest qualifier was Mike Steube. Mike's dad, Bill Steube, obtained all the power from a heavily modified Champion 517. Mike used Associated wheels and tires front and rear, and naturally Weldun gears.

a sidewinder either. I asked Bill Steube about this and he said the guys were running so good, after 3 weeks of preparation for this race with their inlines, that it would be a gamble to change with the race the following day. I tried to explain to Bill that it might be a bigger gamble if they didn't try it, and all they stood to lose was a couple hours sleep. Bill said maybe they would build a couple to try them

out. Incidentally, Bill has moved to a new location for the information of all of you who are buying his motors, chassis, or cars. It's Bill Steube, 16443½ California St., Paramount, California.

The next day for the race the place was packed. Classic is a fairly large raceway but there was barely room to move around. That was it. The test, Inlines or sidewinders? Everybody in

the building was wondering about the answer. Bob White closed the track for practice and started qualifications. Dick Fisher tech inspected each car before qualifying to make sure all cars conformed to the U.S.R.A. rules. About 20 cars had qualified when Lee Hines of the Checkpoint Team qualified. The track record was 8.31 set by Terry Schmid 2 weeks earlier. Lee cut an unreal 8.05. He made it look like it would be impossible for anyone to go any faster. Bill Steube was sitting across the track from me and he called over "Hey, Gene, that was an inline." Bill had a bigger doubt than ever about sidewinders now. It didn't last long tho. Mike Steube came up next and turned 8.00 with his - you guessed it - sidewinder. Terry Schmid turned 8.05 with his sidewinder and blew an obviously faster lap on the last turn. The crowd was really rooting for Terry. A little later Ray Gardner's turn came. Ray had just moved out here from Atlanta, Ga., where he had been a member of the Champion Team and part owner of Williamsburg Raceway. Ray was staying with Cukras, so John let him drive one of the sidewinders he had built. Ray turned a lap that there's no way I can describe. I saw it and couldn't believe it. Would you believe a 7.79? But the most consistently fast man in the qualifying was John Cukras, who is now running for Mura. John turned 7.83, 7.90, 7.91, and 8.03. Not bad for a 261 foot long track with powerpacks set on 12 volts.

After qualifications were over, Con-



Terry Schmid took second place in the main and first in the semi-main with his Steube-modified Champion 517 powered car. Terry also used Associated wheels and tires and Weldun gears.

cours judging was held. Would you believe the fastest qualifier, Ray Gardner, also won Concours? Ray even lettered his own car. Watch out Kovacs! 2nd place went to Lynn Fletcher and 3rd place to Bruce Erickson. There's not much to tell about bodies. Everyone in the race used Dynamic bodies with the overwhelming favorite the Lola GT Coupe. There were also a few Ferrari's and Chaparrals. U.S.R.A. Treasurer, Jeff

Martelli, announced the awards before the racing started. Everyone of the over 60 entries received a Mura 'unmeltable endbell plus the new Mura braid. This more than made up for their entry fee. The total purse was \$196.50 which was made up from entry fees and contributions from Mura, Associated, Weldon, Fred Scott Distributor, Rugger, Kovacs and Speed & Sport Raceways. Champion awarded a boxful of merchandise. Jim Gala-

NAME	TEAM	QUALIFYING E.T.'S	BODY TYPE	MOTOR	TURNS AND NO WIRE	MAGNETS	COMMUTATOR
MIKE STEUBE	CHECKPOINT	8.00	LOLA	STEUBE-517	35-26	ARCO	CHAMPION
TERRY SCHMID	CHECKPOINT	8.05	LOLA	STEUBE-517	35-26	ARCO	CHAMPION
JOHN CUKRAS	MURA	7.83	LOLA	MURA	35-26	MURA 88X	MURA
KEITH TANAKA	ROLLING HILLS	7.93	LOLA	HINES 16D	38-D28½	ARCO	THORP
LEE HINES	CHECKPOINT	8.05	LOLA	HINES 16D	36-D29	ARCO	THORP
DOUG HENLINE	CHECKPOINT	8.41	LOLA	STEUBE-CAN	35-26	ARCO	CHAMPION
RAY GARDNER	WILLIAMSBURG	7.79	LOLA	ZIMMERMAN	35-26	MURA	CHAMPION
JERRY BRADY	COBRA	8.18	LOLA	COBRA	35-26	ARCO	COBRA



Third place in the main and 2nd quickest qualifier was John "The Jet" Cukras, of the Mura Team. John one was one of the first believers in sidewinders and built 5 of them for this race.

gher distributed Weldon sidewinder gears to the qualifiers. With the cooperation shown from the above people slot racing cannot help but grow.

Doug Henline ran away with the first and second consolation races and advanced to the semi-main. There were only 3 sidewinders in the semi but it only took one to win it. Terry Schrud, driving a flawless race won the semi by 3 laps over Lee Hines who was a half a

lap over obviously faster cars, stayed just ahead of Mike Morrissey to grab 4th place and a move-up spot to the main. Doug must really enjoy racing to work so hard to run in all 4 races today. Morrissey was running one of the sidewinder cars that Cukras built and Mike said that if a sidewinder won the main he would put a picture the size of the whole page in *Model Car Journal*. Wow!

Before the start of the main I

received a phone call from Bruce Paschal in New Orleans. Bruce had been getting beat by the locals with stock Champion 517's with No. 26 wire. He needed help in a hurry, and I had sent him the sidewinder. They had raced the night before and Bruce said he had won by 7 laps with his "Silent Screamer" but he still couldn't convince them that the sidewinder was the way to go. What can you do? We also had an honored guest at the race. Jack Lane, the Captain of the Champion Team in Atlanta, didn't quite qualify fast enough for our race, but Jack was sharp enough to relay the sidewinder info to Arco National Champion, Bob Cozine in Atlanta. Jack had just had a call from Cozine. Cozine built a sidewinder and broke the track record in Atlanta by 1/10 of a second! Incidentally, Jack said Cozine will be out for our next race.

Well, time for the main. The big question would be settled. Were the sidewinders really that fast? Would the gears wear out? Would the chassis hold up? Dick Fisher reinspected the cars and lined them up. The power was turned on and the race was underway. Keith Tanaka's sidewinder took off and started running away from the pack! And he wasn't on the quickest lane. Lee Hines had wound a double 28% for Keith and it was a rocket! He easily had the fastest and best handling car on the track. It looked like he was going to make it a runaway. The crowd was going wild! With a gigantic lead and nobody near him the pressure

FRONT WHEELS	FRONT TIRES	REAR WHEELS	REAR TIRES	TIRE GOOP	GEAR RATIO S W = SIDEWINDER	CONTROLLER	PICKUP
ASSOC	ASSOC	ASSOC.	ASSOC.	OWN	WELDUN 3.54 S.W.	COX - MOD	COX
ASSOC	ASSOC	ASSOC.	ASSOC	ASSOC	WELDUN 3.5 S.W.	COX MOD.	COX
WELDUN	MINI- WHEELS	WELDUN	ASSOC	MURA-STP	WELDUN 4.2 S.W.	RUSSKIT - MOD.	COX
DYNAMIC	K & B	ASSOC	ASSOC.	STP & IBM	WELDUN 3.76 S.W.	COX - MOD.	COX
ASSOC.	ASSOC	ASSOC.	ASSOC	OWN	RIGGEN 3.8	COX MRC	DYNAMIC
ASSOC.	ASSOC	ASSOC.	ASSOC.	OWN	WELDUN 3.6	RUSSKIT	DYNAMIC
ASSOC	MINI- WHEELS	RIGGEN	ASSOC.	CHAMPION	WELDUN 4.0 S.W.	COX - MOD.	COX
COBRA	COBRA	COBRA	COBRA	CHAMPION	RIGGEN 4.2	EMOTT	COBRA

of a big race started to tell and Keith crashed in a hard-to-reach place. Three cars passed him but with unbelievable ease he caught up and passed them again to take the lead! This happened a second time and he retook the lead again but he started to crash too much to keep it. On the 27th lap Jerry Brady, who was in last place, lost his brakes and crashed into the wall, breaking off the drop arm, putting him out of the race. At the end of the first 50 lap segment Mike Steube had the lead with 4 cars less than a lap behind. Mike also won the second segment and Cukras the third segment. Some of the best racing took place in the last 50 laps. Steube raced side-by-side with Terry Schmid for about 8 laps with neither car able to pull away from the other, but then Terry crashed and Mike was long gone. Then Schmid and Cukras ended up side-by-side and they raced together for at least 15 laps. They were tied for 2nd place so neither one could afford to slow down. Schmid won out as John crashed. With about 10 laps to go and Mike Steube with a 3 lap lead there was a track call. With the power off, Mike called across the track to his Dad, "Dad, you can't believe how fast and easy this car is to drive!" The race was restarted and on the last lap Mike stopped his car at the driver's stand, gave his car an affectionate pat on the top and then drove it across the finish line for the win. He was so happy he was almost in tears. He has had many 2nd's and 3rd's in these big races, but this was his first win. Bill Steube came around the track and clamped a bear hug on Mike and Terry. Besides taking 1st and 2nd in the main, Team Checkpoint also took 1st and 2nd in class (unlines) with Lee Hines, 5th and Doug Henline 6th. At this point I asked Bill if he thought there was a chance for sidewinders. He was so emotional he couldn't speak, but he gave me a big smile and a strong handshake. Is there a chance for sidewinders? Considering the 1st and 2nd place cars were built the night before the race, think what they'll be like with a couple months of experimentation! If you haven't built one yet, do it now. Don't wait until you're beaten by one. Treat yourself. Lead the parade. You can't believe it!

1st CONSOLATION

PLACE/NAME	TEAM	E.T./LAPS
1 Doug Henline	Checkpoint	8.41 79
2 John Anderson	Champion	8.45 78
3 Jack Garcia	Dynamic	8.44 77
4 Dave Grant	Riggen	8.28 76
5 Bryan Warmack	Riggen	8.49 75
6 Jim Aguirre	Mura	8.50 72
7 John Skeels	Marteson	8.47 54
8 Jeff Martinceli	Dynamic	8.41 4

2nd CONSOLATION

1 Doug Henline	Checkpoint	8.41 98
2 Ken Stanford	Riggen	8.26 97
3 Bruce Erickson	Dynamic	8.29 96
4 Jerry Cowan	Dynamic	8.35 96
5 Lynn Fletcher	Dynamic	8.27 96
6 John Anderson	Champion	8.45 93
7 Joe Kelley	Mura	8.28 89
8 Arnold Atkins	Mura	8.29 86

SEMI-MAIN

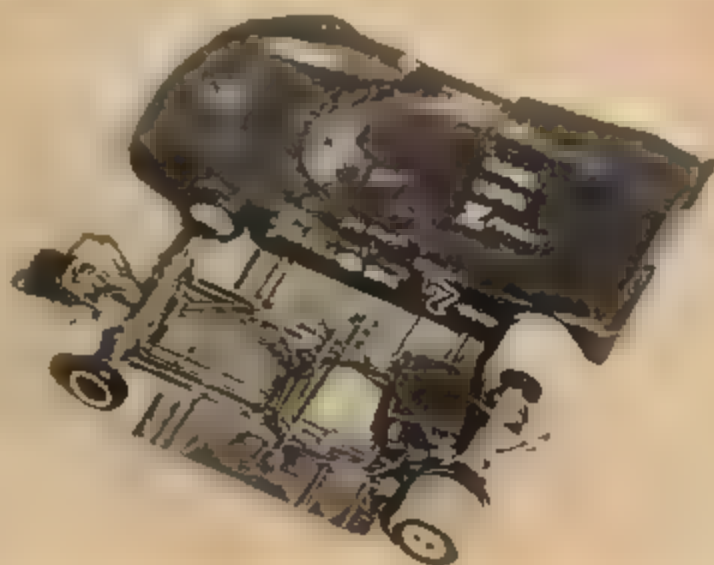
1 Terry Schmid	Checkpoint	8.05 119
2 Lee Hines	Checkpoint	8.05 116
3 Jerry Brady	Cobra	8.18 116
4 Doug Henline	Checkpoint	8.41 114
5 Mike Morrissey	Model Car Journal	8.06 113
6 Ron Blatzel	Checkpoint	8.25 113
7 Ken Stanford	Riggen	8.26 110
8 Dave Howard	Checkpoint	8.23 110

L.A. CHAMPION POINT STANDINGS

1 John Cukras	16	Points
1 Terry Schmid	16	"
1 Mike Steube	16	"
2 Lee Hines	6	"
3 Jack Garcia	5	"
3 Keith Tanaka	5	"
4 Jerry Cowan	4	"
5 John Gallegos	3	"
5 Doug Henline	3	"
6 Ray Gardner	2	"
7 Arnold Atkins	1	"
7 Jerry Brady	1	"

CONCOURS POINTS STANDINGS

1 Lynn Fletcher	5	Points
2 Ray Gardner	3	"
3 Jerry Cowan	2	"
4 Bob Green	1	"
5 Bruce Erickson	1	"



Fastest qualifier and 1st place honors in Concours were awarded to Ray Gardner. Ray even lettered his own body Cukras built the car, and the Zimmerman-modified motor can be easily removed from the chassis.

The top three racers in So Calif from the left Mike Steube, winner of the main, Terry Schmid, winner of the semi-main and 2nd in the main, and John Cukras, 3rd in the main. All 3 are currently tied in the *Model Car and Science* — U.S.R.A. points standings.



Painting Techniques

Part 2

The hows and why of priming and dust prevention

Ben P. Millsbaugh

In the May issue, we talked about paint stands and other basics of painting. This month we are going to get ready to paint.

Preparation is most important if you want a really great finished paint job. You have to get the surface just right to have the paint look good. We are going to fight two big problems this time. These problems are: (1) Paint adhesion and (2) Dust. Both of these come under the same basic classification so we are going to include them in the same article. If you want to get that "just right" paint job, follow some of these techniques.

1) First, get the right products for priming. These are by far the best you can get, so don't settle for less. Martin Senour Paint Company makes the best primer-surfacers going. They come in black, light gray and red oxide. Mr. Spray, which can be purchased from most discount houses, also works well.



2) Putty work should be done before priming. The putty should be allowed to dry at least overnight before working it down. Number #320 wet or dry sandpaper works well for this job.



3) Once your puttied area is smooth and just like you want it, finish out the entire car with #400 wet or dry sandpaper to prepare the plastic for surfacing.



4) First, heat your primer in warm tap water before using it on the car. Leave it in the water for about 3-5 minutes and then dry the can off with a terry cloth towel.



5) The old trick used by many good painters is to first spray the car with a light primer-surfacer. Follow this up with another light coat. Then spray on a coat of dark primer. Why? When you are sanding out the light primer will come "through" on the high spots and the dark will "lay" in the low spots. In this way you can get a perfectly even surface on larger panels.



6) Now the dark primer is sprayed over the light one



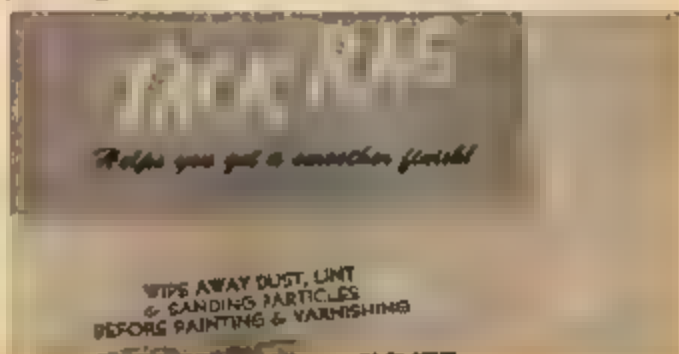
7) Just before you are ready to paint the car, spray it one last time with a final coat of primer surfacer. To get an even smoother finish you may rub the surface down with rubbing compound after the finish is thoroughly dry, say a day or so.

8) If any flaws appear in the primer such as dust or floating trash, remove them with #500 wet-or-dry sandpaper. The priming is basically done and you are about ready to paint it.



9) Some special uses of primer, especially the red oxide, are for steering wheels. Steering wheels are usually wood or leather in custom or race cars. The red oxide looks like the real thing when used in this manner. Red oxide also works well on seats that are supposed to be made of natural leather.

10) Since we have finished the priming phase, let's concentrate on dust. Go down to your local hardware store and get a tack rag. This is used by most painters to "de-dust" the finish before painting. The cost is small, about 35¢ or so.





11) When you are done with a car and you don't have time to paint it immediately, it is a good idea to wash it down with a detergent bar when you do come back to it. Often someone has picked up the car in the meantime. This leaves oily finger prints.



12) After washing the car, you should dry it with a hair-dryer to dry moisture in those tiny cracks and crevices. Also make sure that your hands are clean before handling the model. Avoid drying the car with a towel as this will leave lint.

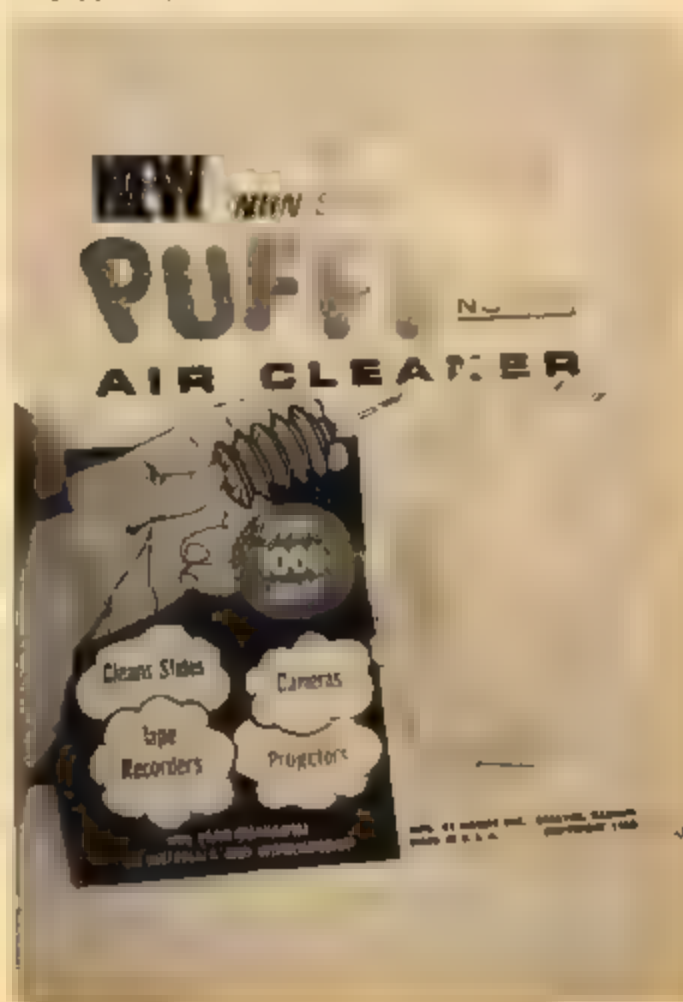


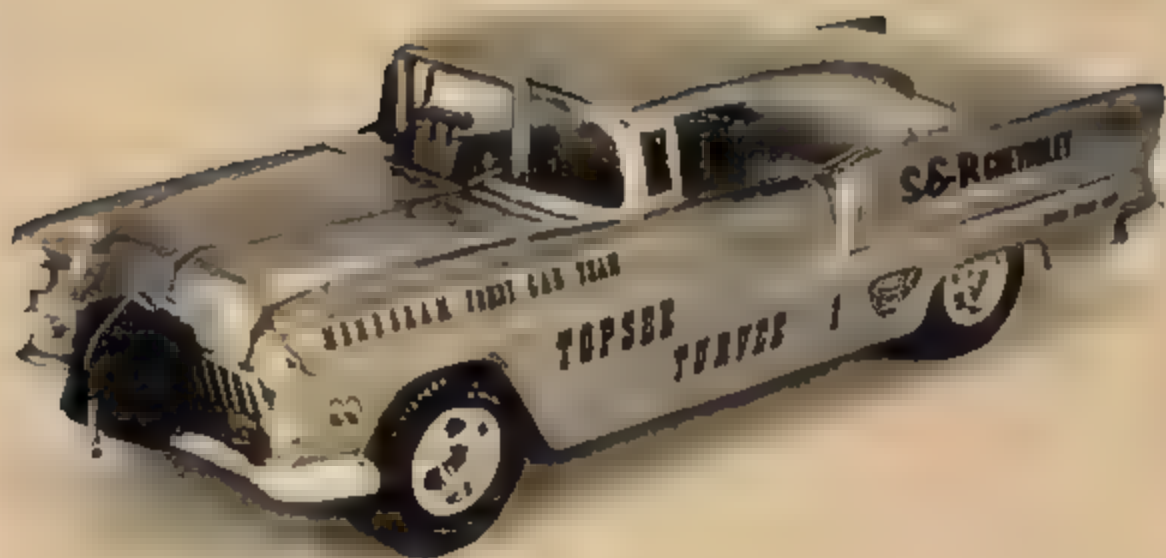
13) If you have a really big glob of oil or grease on the car, use lighter fluid to remove it. This won't affect primer and it removes oil nicely.

14) A product used by professional body shops to remove silicone from a previously waxed surface is a silicone cleaner, shown here.



15) Just before spraying the car I use a little gadget found at most camera stores or the photo division of a drugstore. It is a little bellows and it can remove dust that sticks to the car after all precautions have been taken to avoid it. Try it, you might find it well worth the sixty-nine cents or so.





THE WILDEST FUNNY CAR

Building a "Back-up Funny Car" from Monogram's '55 Chevy

By Dennis Doty

Nothing has been as popular at the drag strips since the AA/Fuel Dragsters as the "Funny Cars." And the way some of the F.C. drivers have been written up in the magazines, they are almost national heroes.

There are two basic types of Funny Cars, the ones that go all out for speed, and the ones that are constructed just to be a crowd pleaser. The most famous crowd pleasers have been the "Hurst Hemi Under Glass," the "Hurst Harry Oldsmobile" and Bill Maverick's "Little Red Wagon." These wild cars have been around for a long time, so they should need no explanation.

This article combines the best ideas of both cars and pickups, a wild crowd-pleasing Funny Car with the body turned around. Yes, Ricky, that is the way this car was planned. I didn't read the instructions wrong. And to the best of my knowl-

edge, I can't remember a real back-up Funny Car being run on the strips. So, right here we may be starting a new trend. However, the best part about this article is that only two kits are necessary, a Monogram '55 Chevy and a Monogram Li'l Coffin. A long drag link will also be needed, and one could be scratch built.

Most additional work needed on this model is with the frame. After the '55 Chevy frame has been notched for the Li'l Coffin front frame member, glue the Coffin frame piece to the notches in the '55 Chevy frame. Before the glue sets, tape the front and rear axle in place and adjust the wheelbase 4 3/4 inches.

Except for safety, almost anything goes with these cars. The shifter may be a little unusual and hard to reach, but this is to be an exhibition car, so what the heck. The parts for the shifter consist of a length of piano wire (the length depending on how

long you want the shifter), and a small piece of round plastic scrap. Bend the wire to the desired shape, then drill a hole in the plastic to accept the piano wire. After the interior has been painted, epoxy the shifter in place. The large epoxy blob will be painted flat black to represent the shift boot. Tape the shifter in position until epoxy dries.

Thin sheet plastic, .010" thick, is best used for the interior cover, as it will take the slight bend required. If you can not locate this plastic at your local hobby shop, it can be ordered through Orange Blossom Hobbies, Inc., 1975 N.W. 36th Street, Miami, Florida 33142 for 10¢ a sheet.

Yes, Funny Cars are a blast to watch at the drag strips, and model Funny Cars are fun and rather easy to build. So if you haven't joined the F.C. crowd, why not start with a really different Funny Car, the Original Monogram Back Up Funny Car.



- 1 Cut away the plastic between the frame rails. Remove the seat from the Monogram '55 Chevy interior as shown.



- 2 Cut the engine compartment from the body. File away all cutting marks.

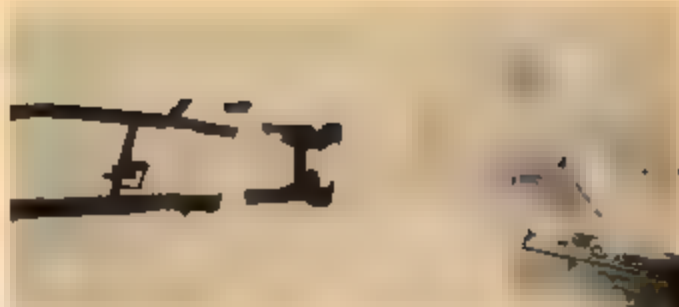
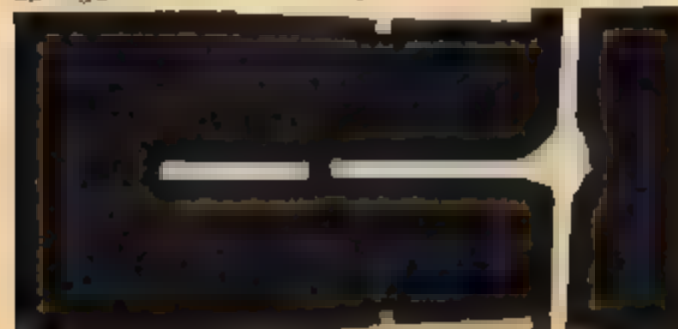


- 3 Shorten the rear of the frame 5/8". Glue the rear frame piece in place and let it dry completely before continuing.



- 4 Drill out the hole in the rear wheels from Monogram's LIL COFFIN to 1/8". File the mounting flange on the rear axle down; then narrow the tread to fit inside the body.

- 5 Shorten the drive shaft approximately 1" and the



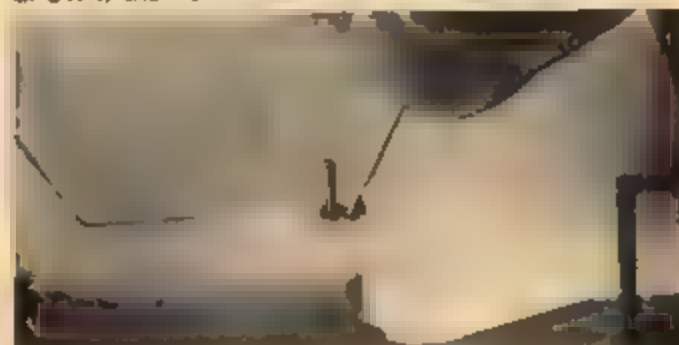
- 6 Cut Monogram's LIL COFFIN and '55 Chevy frames approximately in the same place I have.



- 7 Notch the Chevy frame, then glue the Coffin frame piece to it as shown. Line up the wheelbase before the glue sets.



- 8 Adjust the body on the frame and interior as shown, then drill four holes for 00-90 bolts.



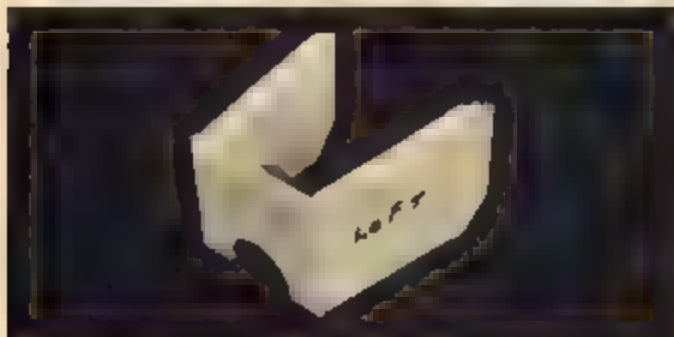
- 9 Bolt the frame to the interior, then epoxy the 00-90 nut to the interior. Don't get epoxy on the bolt.

- 10 Fill the gap between the interior and the front wheel well with plastic as shown.





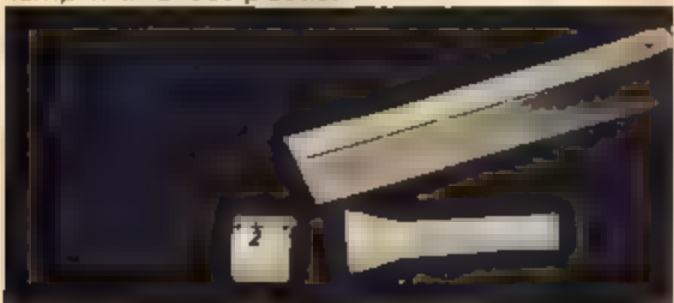
11 Cut down the interior floor to clear the engine



12 Use the template to cut out the interior pieces. Glue the pieces together in the interior.



13 Fill the hole in the floorboard for the transmission hump with sheet plastic.



14 Cut the hump from the floorboard piece and shorten it 1/2\" as shown

15 Shorten the hump to fit inside the interior. Grind out the hole for it with a Moto-Tool or file.



16 Make the front and rear engine mounts out of plastic strips. Use the engine to position the mounts.



17 Make a drive shaft loop for the drive shaft, as shown. The design is up to you.



18 Before continuing to the next step, glue the racing interior to the interior.



19 Now cut the interior cover from the template supplied and glue it to the edges of the interior. Tape in place until the glue sets.

20 With the interior cover completed, cut out the racing interior.





21 Cut down the steering gear assembly as shown. Drill a 1/16" hole in the side of the steering box and the steering wheel.



26 Make a roll bar out of several old ones if you don't have one that will fit.



22 Make a bracket to hold the steering assembly. Positioning is up to you.



27 Fix down the racing interior as shown, for the roll bar supports.



23 Drill a 1/16" hole in the side of the interior and cut down a Coffin roll bar to connect the drag link to the steering box.



28 Make a custom shifter as described in the text. After the epoxy is dry, paint it flat black for the shift boot.



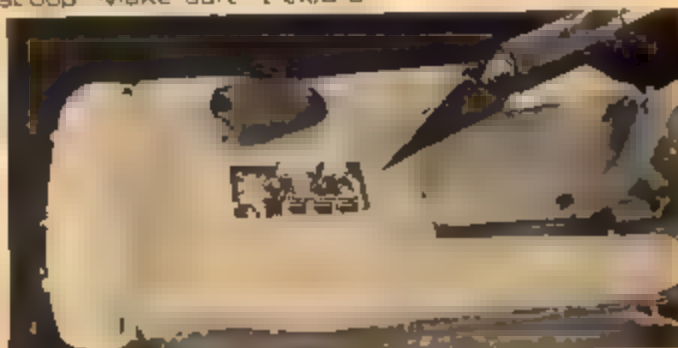
24 Here is how the three steps should look when completed.

25 Shorten the drag link to fit your steering assembly. File a hole in the front wheel well for it to pass through.



29 Add a piece of plastic to the bottom of the stock '55 Chevy air scoop for use on the blower.

30 Cut a hole in the interior cover for the blower and scoop. Make sure it clears.





31 Make a battery and gas tank support out of sheet plastic.



36 Relocate the springs on top of the frame. Lowering blocks, filed down, will be required.



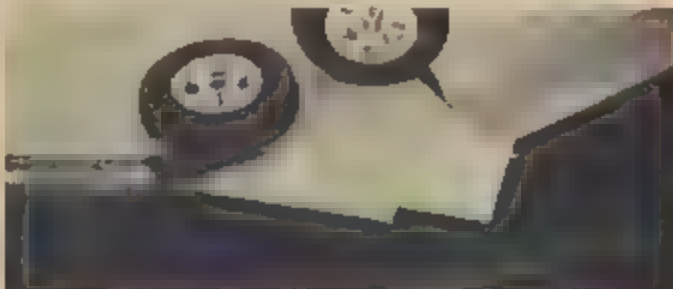
32 Notch the cowling as shown to clear the seat if necessary.



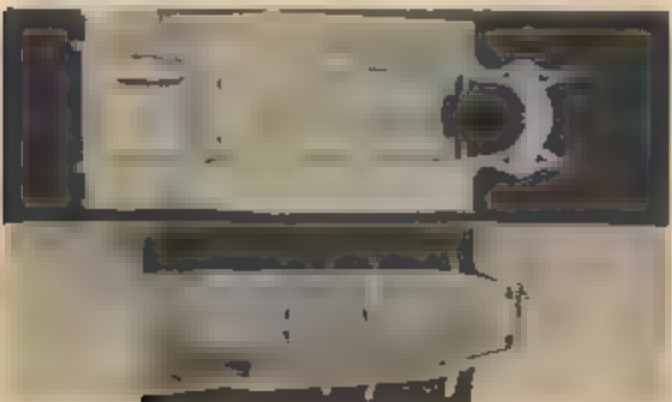
37 Turn two plastic "washers" to 1/2" in diameter. Drill a 5/32" hole through them. These will be used for front disc brakes.



33 To enable the front wheels to turn a little more, grind down the rear wheel wells for more clearance.

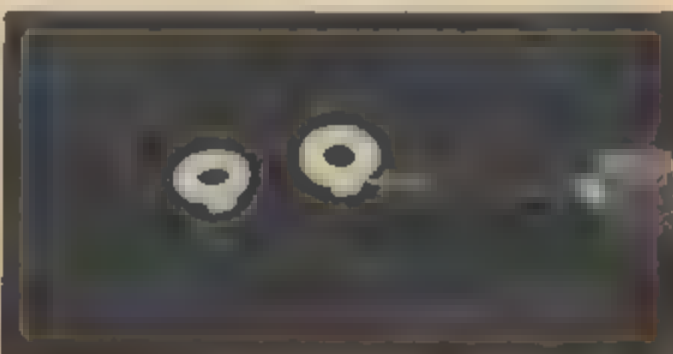


38 Make the caliper portion from thick plastic. Notch the disc and glue it in place.



34 Here you can see the difference between the stock and reworked frame.

35 Cut the spindle from Monogram's Li'l Coffin backing plate and drill the hole to 1/8". Cut the mounting hub off also.



39 Drill a hole in the side of the caliper for the brake line.

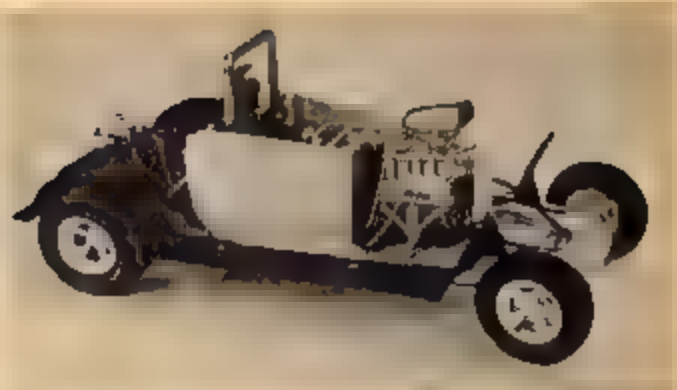
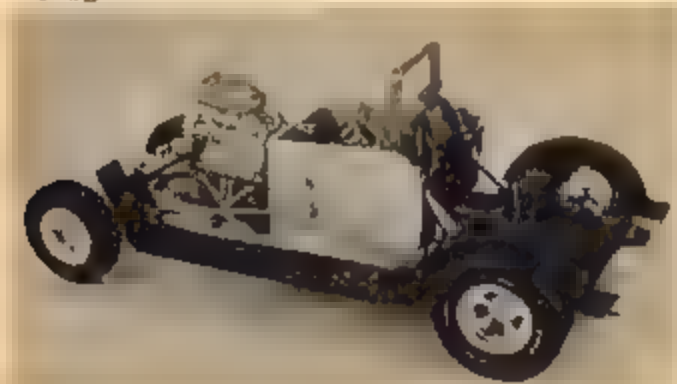
40 Completely wire the stock engine for added realism. Any engine can be used.





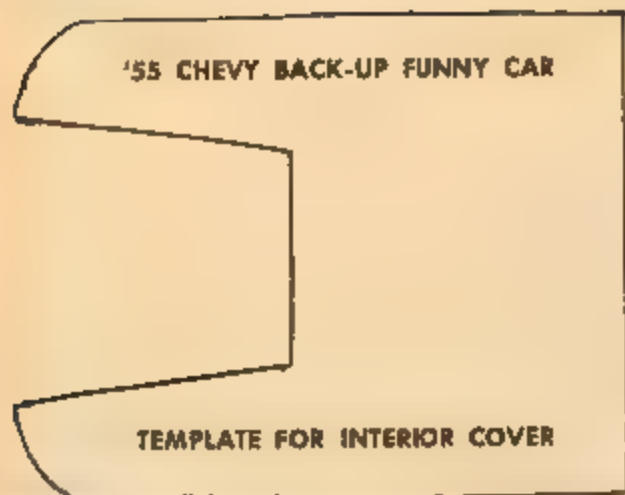
41 Hose lines from the radiator to the engine are made from bell wire, with the wire removed.

42 The completed chassis should look like this if you followed us. The drag link is from an old Monogram "Sizzler" kit.



43 For the most points in any contest, include as much wiring and detail as you know how.

44 The body now can be painted and lettered. Mask off chrome moldings with pin striping tape and paint them silver.



Patterns are slightly oversize to allow trimming

TEMPLATE FOR INTERIOR PIECES

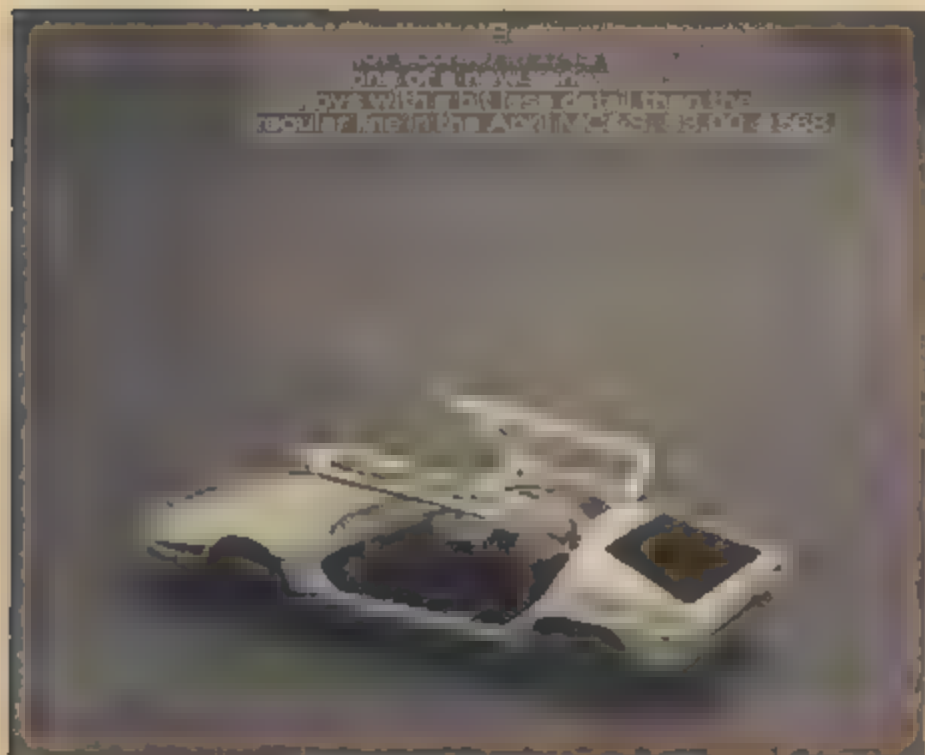


THE AMERICAN COLLECTOR

The latest offerings from the world of metal miniatures.



De Dion Bouton 'Victoria' is Rio's 1/43 scale version of the 1894 auto \$7.95 #30



Each month brings an added listing of dozens of interesting and exciting cars for the collector. The most exciting, to the auto-enthusiast, is Poltoy's 1/43 scale 'Marzal'. This is a model of the same car that was featured on the cover of the July 1967 *Road & Track*—the car with the glass sides, Lamborghini chassis, and Bertone body. It is a lower quality (and lower cost) model than most of the Poltoy line at \$3.00, but is still a real conversation piece. The photos and captions show some of the other newer cars including the latest three releases in the very best of the 'classic' line, Rio, and the Mebtoy Corvette 'Rondine' with engine spark plug wiring yet.

A number of readers have asked where to order collector's cars that are not sold by their local dealers. There are several dealers in this country who specialize in just mail order collector's cars. Those we know to have had reputable dealings are listed below.

RepliCars, Box 385, La Mirada,
California 90638
Sinclair's, 300 E. Highland Drive,
Rochester, New York 14610
AutoWorld, 701 No Keyser Ave.,
Scranton, Pennsylvania 18508
Jeco Miniatures, 2837 Ladybird
Drive, Dallas, Texas 75220

Each of these firms offers a complete catalog of the models they stock. These catalogs sell for about 60¢ or less. Please remember always to add about 50¢ per car for packing and postage, and state sales tax if you live in the same state from where you order. When you write to any of the above suppliers, mention

that you saw the car or their address in *Model Car & Science*. A brief note of our personal thanks must go to Mr. Lynn Becker of RepliCars for his cooperation in securing these photos of cars that are just now arriving on dealers' shelves. One day we'll give you a glimpse of Lynn's personal collection numbering in the thousands.



The Mercury Chaparral 2F in 1/43 scale #30, differs slightly from Mebtoy version. \$3.50.



Soldo's splendid Chaparral 2D is copy of later Nurburgring version. Nice wheels and clever engine opening. \$4.50 1/43.



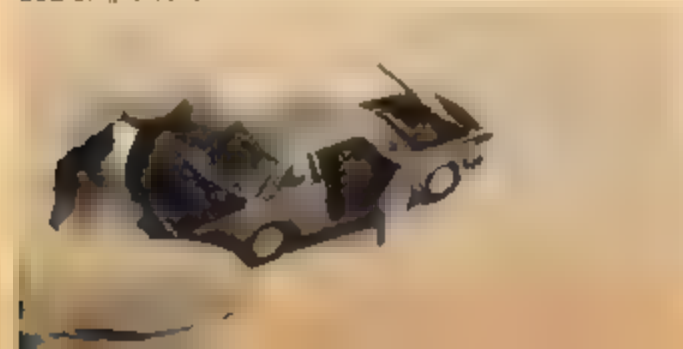
Neat Little F at 850 Spider by Mercury in 1/43 scale. \$2.75. #12



Rio is the best of the 'classic' era collector's cars. This is one of their latest three, #31, the 1901 Fiat 8cv. \$6.95.

One of few models of Mustang this 1/43 scale convertible by Tekno has nice detail and is one of their latest releases #833, \$3.50.

Rio #32, the Fiat 16-24cv. of 1903. 1/43 scale like all the later Rio models. \$6.95
New from Politoys is this BMW 2000CS in 1/43 scale. #546 \$3.50





A look at the romantic cars of the Roaring Twenties

For the third time in less than twenty years, the era of gangsters, prohibition, and (of course) the classic automobile is again in the limelight of the American entertainment media. To the car fan, the cars alone are enough to make the period one of the most exciting in the history of the automobile.

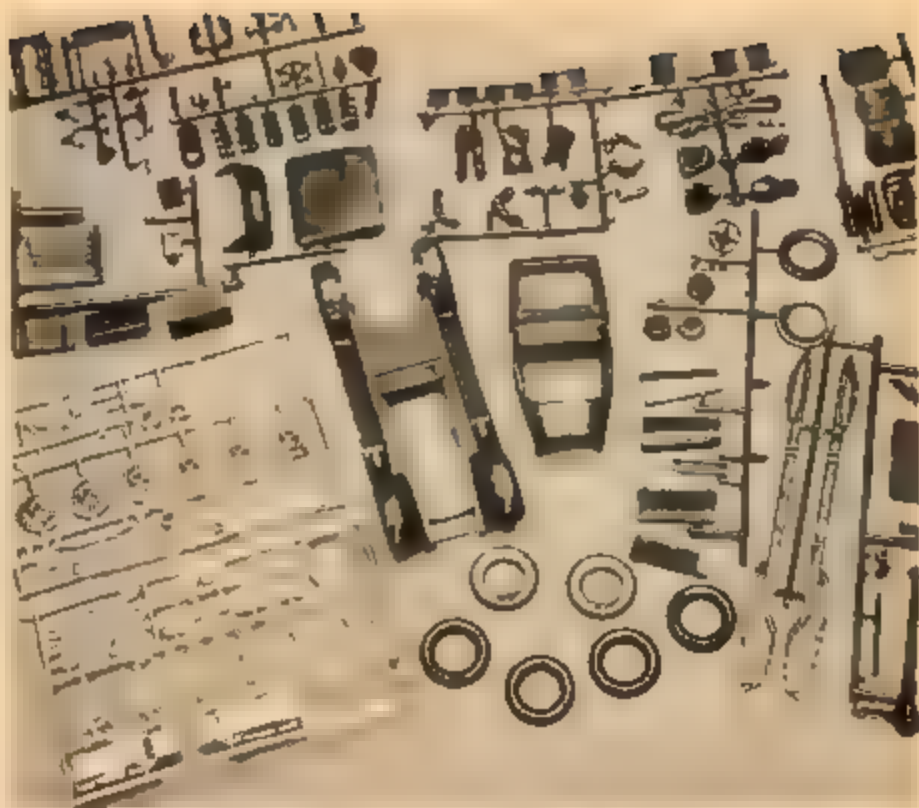
Most of the tales you see and hear concerning the "Roaring 20's" are incredibly close to the truth. Armed armadas of 1920-period autos were directed through the streets of the Midwest in search of foes, armed to the teeth with machine guns, rifles, pistols and bombs as one gang fought another, or the police, or vice versa. The four door convertible was purported to be the favorite of the gangs as much as it was the favorite of the idle rich, but for different reasons. The gangster found the cloth side-curtains of these cars a far faster gunport than a glass window. It is reported that the rather musty look of the plastic-windowed side curtains was most effective in allowing the gangsters inside to see out without their victims being able to see in. Skillfully driven and planned, a convoy of three or more of these huge automobiles was more like an armored division in the street war between gangs and gangs, or gangs and police.

The three popular MPC 'Gangbusters' cars of the Roaring 20's. Each car is accurate 1/25 scale with two 'cop' or 'robber' figures and optional bullet-shattered windows and radiator grill.



Model Products Corp. (MPC to you) has an entire series of 1/25 scale kits of the more popular cars of the 1920 era. Most kits contain bullet-riddled windows and radiators, as well as an arsenal of weapons and seat compartments or rumble seats to hide them in. If you're more interested in cars than Capone-type gangsters, the precise scale and detail of each kit will delight your 'classic' eyes. All cars have full interior and suspension detail with nice detail touches like working steering, wire wheels, luggage racks, opening hoods that are hinged like the real ones, and a choice of either 'up' or 'down' convertible top positions.

10 1920-era cars are offered, ranging from a 1932 Chevrolet roadster at \$1.70 to the huge 1928 Lincoln 'Touring' four-door in the photos. The most popular items, however, are the three "Gangbusters" cars: the 1928 Lincoln Touring, the 1932 Chrysler Convertible Sedan, and the 1927 Lincoln Roadster. Each of these three sells for \$2.00, and is a close copy of one of the more famous cops or robbers cars of the Roaring 20's.



Parts for the MPC 'Gangbuster' 1927 Lincoln Roadster are typical of each kit. Simple assembly shows detailed suspension, engine, and interior.



"Gangster" pieces are included as extras in the kits shown. Stock windshield, radiator grill, and figures, arms without guns are also in kit. Small arsenal, huh!

One driver and one 'walker' are in each kit. The '27 Lincoln has a 'gun moll' lady driver!



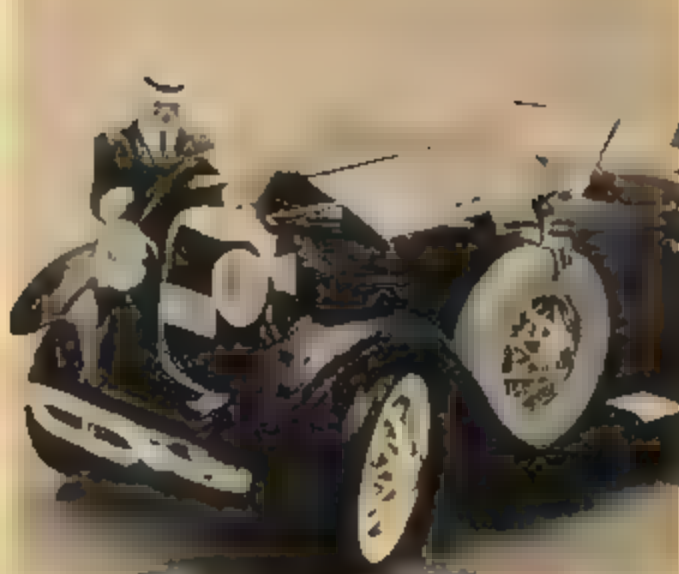
Sub-assemblies of chassis and body are part of assembly procedure. The real cars of the period were often furnished to body builders as chassis just as shown here.

Each of three 'Gangbuster' cars has steering front wheels that can actually be steered by turning the steering wheel.





The hoods of these 1/25 scale models by MPC are hinged in two places just like the real cars! Full engine detail too.



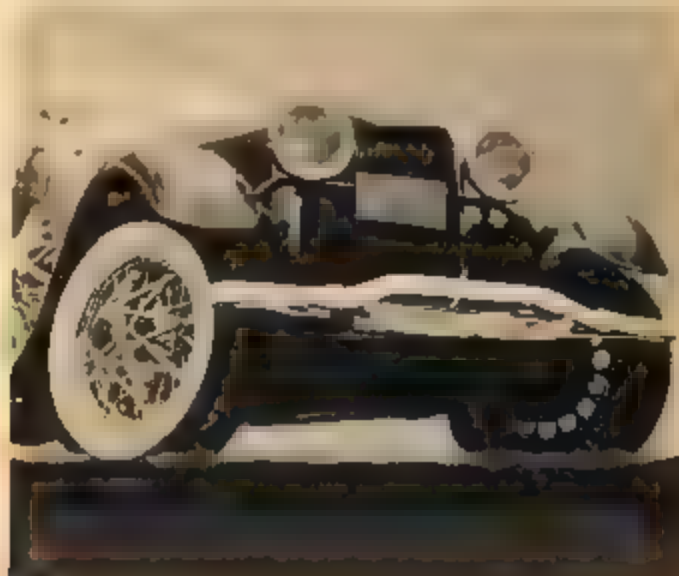
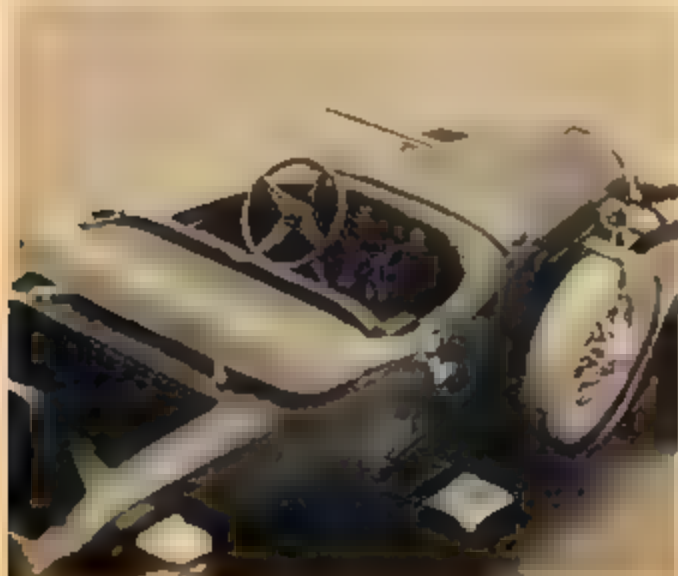
Grease rack's view of the MPC '28 Lincoln reveals completely detailed chassis and engine.

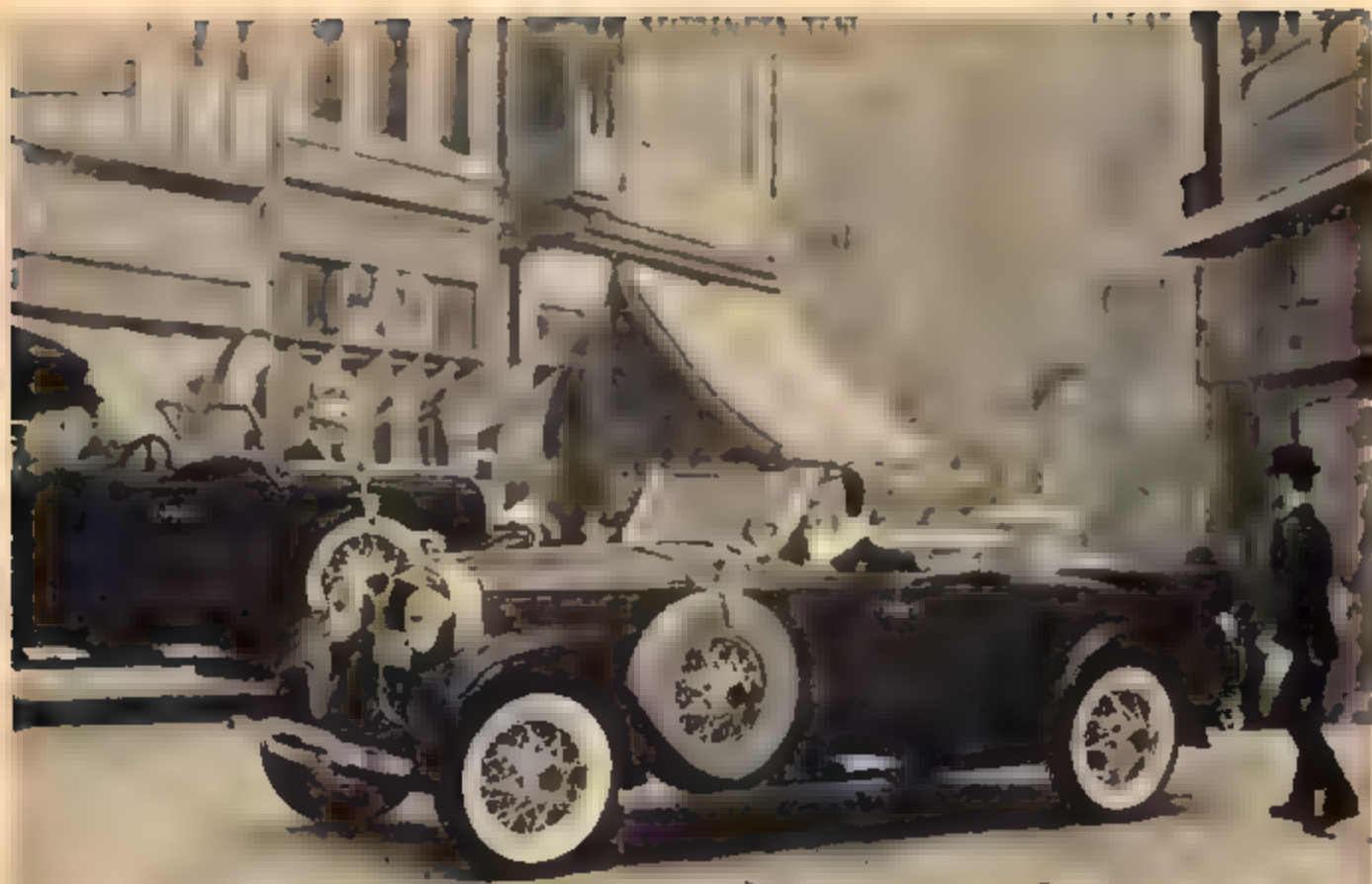
Note the interior detail including pedals, gearshift, handbrake, instruments, and that bullet-shattered windshield.



Like the real car, the MPC model has a folding luggage rack at rear with separate "trunk" that can be left on or off the finished model.

Wire wheels, separate headlamps, and exposed radiator are typical of the cars of the 1920's. The bullet-holed grill is not considered desirable by one of the real car's owners!





Two of the cars of the Roaring 20's pass in the street in 1/25 scale.

The gangland funerals were a common occurrence in the 1920-era big cities. MPC's '27 Lincoln Touring carries a casket, followed by the MPC '27 Lincoln Roadster.



DUAL PURPOSE CHASSIS



An easy-to-build chassis for 1/32 racing finds a home under a Cobra sports body, and a Ferrari D-50 Grand Prix body. Two for the price of one!

By Robert Schleicher

In many clubs, the rules allow you to use the same chassis with different bodies for separate racing classes. When they do, you need only build and tune one chassis. To race in the sports car class, a sports car body is screwed in place on the chassis. When the time for Grand Prix racing rolls around, the sports car body is removed and the GP fitted in its place on the same chassis. Saves tuning, maintenance, time and money.

The trick is to find two cars with nearly the same chassis dimensions, then model bodies in 1/32 scale to fit, and (often the most difficult of all) rules that will allow body swapping. The Cobra and the Lancia-Ferrari D50 will fit the same chassis so you can build either or both

The Cobra is one of the earlier 289-engined versions fitted with the now-famous extended fender lips to allow wider tires and wheels. Our bright red #13 car was patterned after the car Tom Payne drove to a GT class win at the 1966 Labatt 50 at the Saint Jovite track in Canada. On the full-size car a pair of white exhaust pipes hang under either side (so much the better to hide the 1/32 scale "pan" chassis). The body is Revell's 1/32 scale with styrene lips added.

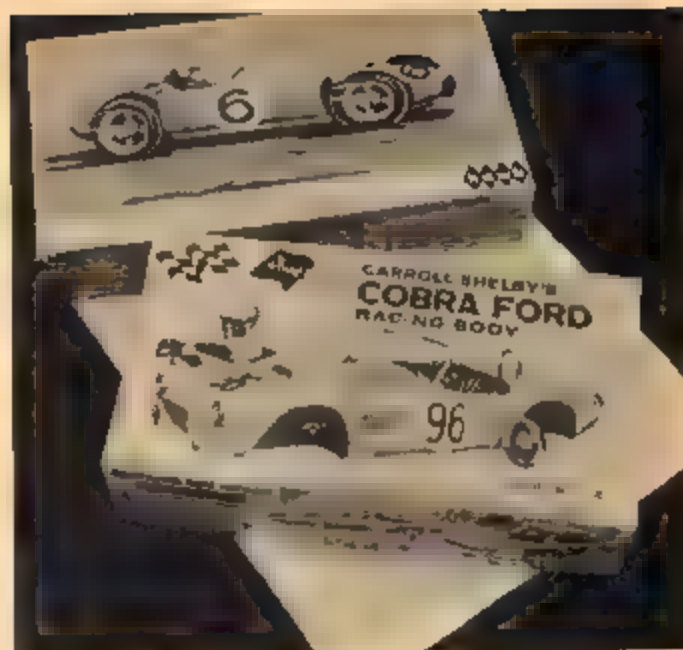
The Lancia-Ferrari was raced during the 1956 Grand Prix season. Its greatest advantage as a model racing car lies in its use of side-mounted gas tanks. The better-handling 1/32 scale cars all use the widest possible

brass pan slung beneath them to lower the center of gravity, reducing the tendency for the car to roll over in a corner. The narrow bodies of most GP cars precludes the use of a wide pan, while the Lancia-Ferrari D50 is wide enough to hide a normal width pan.

The #20 car in the photos is a duplicate of one driven by both Fangio and Castellotti at the 1956 *Grand Prix de Monaco*. The *Model Road Racing Handbook* lists at least 6 other paint jobs and/or numbers used on this famous 2½ liter formula 1 Grand Prix racer. Hawk makes the 1/32 scale body used on the model. Both a 39¢ and a 60¢ kit are offered. Buy the 60¢ version and get chrome parts and windscreen.



Dynamic #510 motor mount, #585 front bracket, and #541 tongue will be required with one of the new 1968 Mabuchi motors, a Cox Super Cuckoo "reverse" pickup shoe, and wheels, tires, axles, and gears of your choice.



Hawk Lancia-Ferrari body and Revell Cobra body, both 1/32 scale, and some .020" sheet styrene will be needed for the two bodies



Cut four 1 3/4" x 1" pieces of the .020" thick styrene plastic sheet and form to a smooth radius curve over a broom handle or dowel.

Glue the styrene lips into each of the four wheel cutouts with plastic cement. If lip is shaped correctly, clamps will not be needed. Dry for at least a week, then file smooth at body joint and shape edges as in photos of finished body, prime, and paint.



Trim all four Cobra wheel cutouts 1/16" oversize to allow for the thickness of the styrene lips. Leave a bit of original lip on body to act as a fillet for new lips.

Tab on front of Dynamic motor mount must be trimmed away with a razor saw to allow for short wheelbase





Shorten the Dynamic frame tongue as shown at the right. File away any sharp edges.

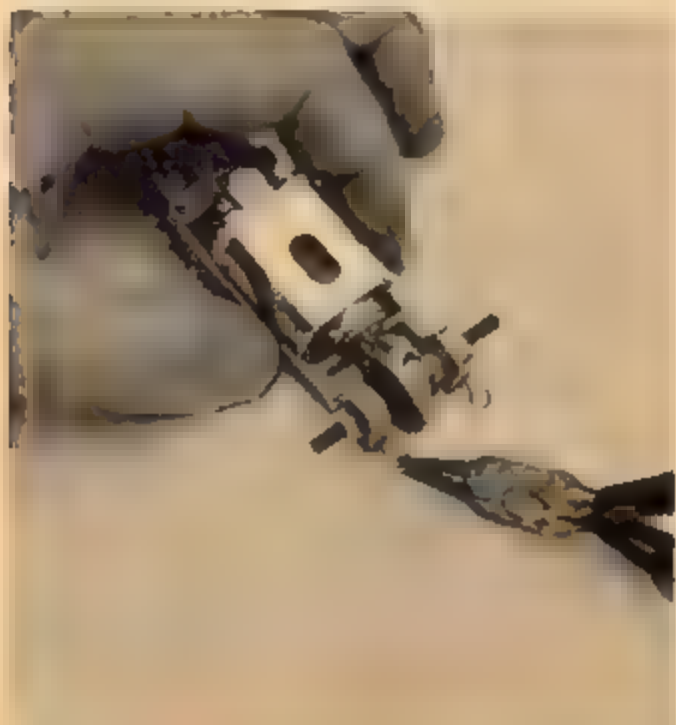


Dynamic #585 front axle mount can be filed or ground to the shape at right to save weight.



Drill a 1/16" hole in the back of each rear axle block as pictured.

Epoxy the two wire "keyholes" into the holes you just drilled to serve as rear body mounts



Bend some .020" piano wire to a keyhole shape using need-nose pliers. Make two.

New Cox #3837 Super CUC guide shoe will allow a shorter length chassis without harming the car's handling. Guide will not protrude out from under nose of body





Completed chassis has narrow tires with the Cobra's wire wheel inserts to match the Lancia-Ferrari body. Cobra should use wider tires and wheels at both ends.



Assemble Hawk body and cut away around rear axle to fit chassis. Glue in a ball-point pen plastic case for front mount.

Lancia-Ferrari D50 fits chassis nicely. A piece of 1/32" K&S brass sheet can be cut to about 1-1/2" x 2" and glued to bottom of motor as a pen to improve handling. Paint body, add decals, and epoxy windscreen in place. Add driver.

Completed Lancia-Ferrari can be track-tuned. The Cobra body will fit the same chassis for a two-class racing car.





MODEL OF THE MONTH

HOW TO ENTER OUR CONTEST

You can enter any kind of a model you like (train, plane, boat, car, etc.) so let your imagination run wild! Just send one or two sharp black and white (no color please, we can't use it) photographs of the model, and a brief description of what you have done to it. Remember, other readers are interested in what you have done to your model, so be specific when mentioning the parts that you used. Send to: Editor, MCS, 171 Barrington Place, West Los Angeles, California 90049. Sorry, we can't return photos.



The winner of this month's \$25 Savings Bond, Charles Hertwick, of 185 Merrill Place, Costa Mesa, California 92627, scratched up this big beauty over an 11 month period. Chuck used balsa wood and scrap parts from 11 kits. The cab, frame and bumper are made of balsa. A black and white film negative was used to make the tinted windshield. The emblems and the company sign were cut from pictures of the real truck. The radiator grille is made of fine screen and

chrome parts. Exhaust stacks and the hydraulic lifts are made of old radio antenna. The engine and running gear are made of balsa and plastic. The fuel tank is from a '29 Ford kit model. Oil tank, battery box, rear fenders, tilt bed and rollers transfer bar and the trailer are all constructed from balsa. The real truck works out of Rivers de Scrap Iron and Metal Company in Riverside, California. It hauls all kinds of scrap metals. Sort of leaves a guy breathless, doesn't it feel!





Earl Robb of Armada, Michigan came up with this "Rocket Action Twister" '65 Corvair Corsa with a Cobra motor topped with 4 carbs. The rear end and drive shaft was custom made from scrap.

The roll bar, instrument group, front suspension, radius rods, chrome wheels and white tires came from a '67 Falcon kit, by AMT. Very cool machine, Earl.



Gordon Fisher operates his "Fisher Body Shop" out of his home on Temple Terrace, Florida. Gordon dubbed this startling mode "The Canary."

It started life as a toy car. It has a wired '65 Merc engine, Astro wheels, and an upholstered interior. It's a real gasser, Gordon.



A/IC Carl Lubelczyk, who is putting in a bit of time at Otis Air Force Base, Massachusetts, built this gorgeous '41 Willys in his leisure time. It has a blown Olds engine, fully detailed with spark plugs, ignition wires, fuel lines, battery cables and brake lines. The frame has been left stock, but the front axle has been drilled out with a small drill. Slicks have been sanded to remove the shine

and make them appear more realistic. The push bar is made from chrome plastic tree scrap. The coupe is painted dark green with a black interior and aluminum floor. Automotive touch up spray paint was used for the paint job, covered with several coats of hand-rubbed Simonize. Mighty fine, Carl.

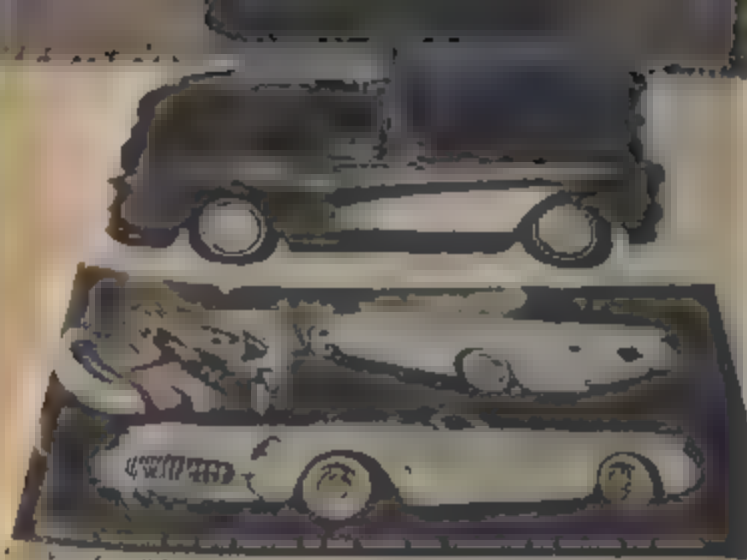




Would you believe a "Backwards Pick-Up" made from a IMC Little Red Wagon? We do, after seeing Joe Chiusano's sharp car. Joe lives in Brooklyn, N.Y. He plucked a 427 cubic inch Ford engine from a Falcon Funny Car, and went the route on the wiring with fuel lines from a moon tank, plug wires, etc. Joe also made a removable dipstick. The body and chassis is wild! The floorboard was cut to 2" in length, by 1/4" larger than the original opening. The chassis was installed in reverse, which enabled him to mount the engine. The front wheels are from the AMT Falcon Funny Car, tires from IMC's Little Red Wagon, rear slicks from Monogram's '29 Ford Pick-Up. Two casters behind the rear axle are used for "wheels" control!

Traction bars are from Revel's custom car parts. The interior was completely turned around. A single bucket seat is used. Fire extinguishers and gauges are mounted on the dash, with a wired tach on top of the dash. The chute ring comes from the fire wall. Interior is painted flat black. The caged roll bar is fitted to the interior and is painted silver. Six coats of AMT Sterling Silver, and six coats of AMT Fire Orange Metal Flake paint were used on the body. The sides of the cargo area is painted flat black. The floor and firewall have been covered with wood texture contact paper. The lettering was put on with press-on type. All very beautifully done Joe. Congratulations.





Biography of the BIG ONE

Keith Rowland of Allison Park, Pa., took a '57 MPC Corvette and changed it into a '53 Corvette! This unusual switcharoo requires quite a bit of work, as follows: The elongated hood humps were removed, scoops on front fenders near windshield removed, headlight apertures angled and enlarged, recessed license hole cut in trunk, segments from part "trees" wedged into the rear light holes, the recessed panels on the sides filled with several thin applications of putty, putty applied around the segments in the rear fenders and shaped, and the door lines scored with an X-Acto knife. The body was then painted flat black to prevent the dark putty from showing, and accent the door lines. Next came a coat of pearl white, in which is nestled a red interior with red felt carpeting. The steering wheel came from an old Merc. Regular door screen covers the headlights. A 327 with two 4-barrels was dropped into the '57 frame. It is fully wired, like the chassis. The entire project took two months to build, and Keith reports he's mighty proud of it. Well, he should be!



Jerry Jaramillo, of San Diego, California, has created this Double A/Altered VW, powered by a 426 Hemi engine, which is completely wired. The gas tank, tech and parachute are also wired, and the chute has a chute handle. Other options are home made seatbelt and padded roll bar. The body is finished in orange. A very clean machine, Jer



Ever wished you could build a really super-detailed slot racer? One with ALL of the scoops opening into ducts to the brakes and radiator, with smooth-sided tires marked with the racing brand, and, naturally, a complete interior? Of course you have, but what kind of a nut would race such a thing of beauty? Obvious answer? Don't race the car, display it on the shelf so you can show it off today, and next month, or next year as well. The model kit manufacturers are finally waking up to the fact that there are other types of cars besides dragsters, 'funnys', and customs. The most alert of these kit makers is the Industro-Motive Cor-

poration (IMC, for short). These detail-mad folk actually concentrate their efforts on the sports/racing cars you've built or admired on the slot car circuit. Presently, IMC is selling 1/25 scale models of all three Ford GT's—the Mark II, 'J' Car, and the Mark IV—a Lola T-70 roadster, and the Chaparral 2E. More will follow by the time you get these five built and painted.

The Chaparral 2E is the latest IMC sports car for the shelf. Like the other kits, it sells for \$2 and includes one of the best detailed sets of tires, engine and suspension in any model. The radiator ducts lead to miniature radiators and the doors

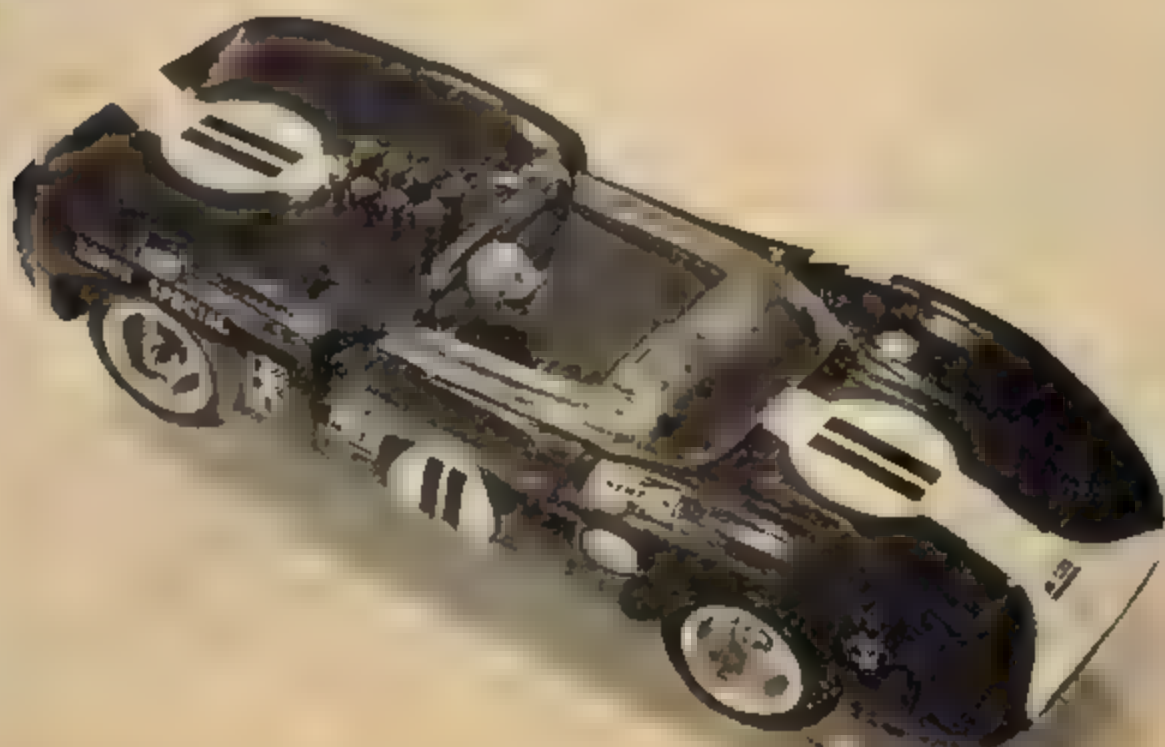
drop open in the same manner as Jim Hall's roadrunners. The famous Chaparral wing is connected to the rear suspension and it is movable. The odd assortment of oil tanks, suspension arms, disc brakes, etc., are all right there on the model, occupying the same position as they do on the full-size car. The finished model looks as complex as it should, but assembly of the kit is so easy you won't want to tell your friends about it. Each complex detail area (front suspension, rear suspension, engine bay and driving compartment) is pieced together in a most logical and neat fitting manner, as outlined in the clearly illustrated IMC instruction sheets.

These IMC sports/racing and GT shelf models are one simple way to show off just how well detailed model kits are. One of these beauties on your shelf is a silent way of bragging about your ability as a modeler. Just set the finished car there and don't say a word.

By Robert Schleicher

SHELVE THOSE CAN-AM CARS

IMC offers Sports Racing cars in full-detail kits for the shelf





IMC is famous for well detailed tires. Note sharp tread detail, flat tread surface, and precise sidewall markings.

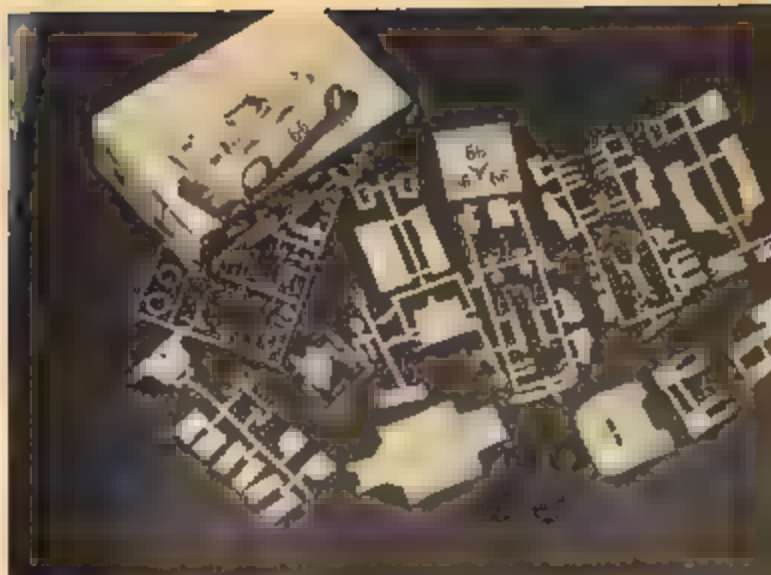


Chrome-plated wheels are perfect copies of the famous Chaparral wheel. Spray with Testor's Dulcoat clear, first, paint to give wheel the look of aluminum.



Nose piece exactly duplicates the unusual Chaparral fender grill and windshield fairing. Paint grill gloss black.

Driver figure is also included. Arms can be positioned in a number of life-like poses.



Newest sports-for-the-shelf IMC kit is this 1/24 scale Chaparral 2E roadster at \$2.00. Clear, logically illustrated, instructions make assembly simple enough.



Completed 2E is mounted on a block of pine sawed at an angle and stained walnut. Note extended wing tips used on this version of 2E.

IMC Ford GT Mark IV kit has accurate decals, driver's head clearance lump in roof, and correct engine and suspension detail. Both front and rear decks open on finished Mk IV kit to reveal details of engine bay and working steering.



TOOLS TOOLS TOOLS

Can't build that dream model without the proper tools!

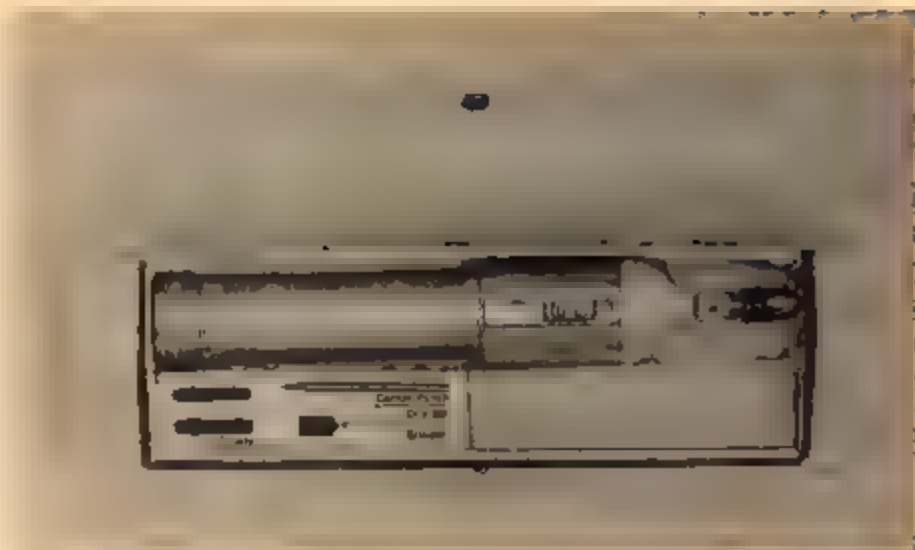
Here's a sampling of what's available.



While it is true that a good model builder can put together a beautiful model using the simplest of hand tools, it's also true that the same builder can put together an absolutely *fantastic* model, given tools just a bit more advanced. And certainly the use of modern tools makes the building project more enjoyable.

We've gathered a few of the most commonly used tools, to show you what generally is available. It's not a complete listing — that would take an entire issue — but rather a sampling of the goodies that abound on your dealer's shelves. Write directly to the manufacturers (a list of addresses is included with this story) for a catalog. Some catalogs are free, some 10c to 25c. To be on the safe side, always send at least 10c with your order. You'll enjoy hours of dreaming, looking through these catalogs, and you're sure to find just the tools to fit your needs.

"Sight Master" glasses by Magna Sales Co., make precision work easy. These \$6.95 glasses magnify the image you see 2½ times, and can be worn over regular eyeglasses. To resume normal vision, just lift your head a bit. No need to remove the Sight Master.



X-Acto's powerful cordless drill sells for \$5.95, comes with drill bit, grinder, center punch and two extra collars. It grinds, polishes, deburrs, carves and drills. Great for model building of all kinds.

X-Acto has updated their coping saw, and here's the result. This adjustable jeweler saw (No. 43N) sells for \$3.25. Extra blades are available for 50c, ten to a package, in sizes No. 2, No. 3/0 and No. 5.



Small screwdrivers are probably used more by the slot racer than any other tools. X-Acto's No. 365C-ST set, selling for \$1.20, really fill the bill. Bit sizes No. .055, .070 and .100 are included, which take care of just about every model building situation.

X-Acto's No. 378 soldering iron does double duty as a hot knife. The price is \$4.00, or \$3.60 without the hot knife blade, this tool is great for scratchbuilding slot cars, or working with static plastic models. The hot knife blade opens plastic doors, trunk lids, etc., as easy as pie.



No. 365C-ST

JEWELER'S SCREWDRIVERS

WITH SWIVEL HEAD

Bit Size	Price
.055	\$1.20
.070	
.100	

All Aluminum
Handle
Steel Blade
Swivel Head

x-acto

X-ACTO

PIT KIT



FOR TABLETOP RACEWAY CARS

The No. 73 Pit Kit by X-Acto is a fine all-around tool kit, reasonably priced at \$5.50. Included are a needle file, X-Acto oiler, bristle brush, screwdriver, imported pliers, special locking tweezer, plastone abrasive No. 1 X-Acto knife and a special track cleaning fluid.



Good quality paint brushes are available in just about any paint or hobby store. A wide, flat brush or two, and several fine-pointed ones in No. 0, No. 00 and No. 000 will take care of your needs. Good brushes last indefinitely if they're taken care of.

The latest tool chest from X-Acto is this impressive No. 99, Super-Set Tool Cabinet, at \$80.00. Contains a complete range of hand tools (shown) in a handsome wood chest. What a great gift item to give (or receive!).



Dremel Mfg. Co., maker of the Moto-Tool, also offers a special drill press for the Moto-Tools, for \$15.00. The No. 260 Moto-Tools, a brand new version of the old tried and true Moto-Tool, needs a \$1.50 adapter before it will fit the drill press. However, the presses will soon be sold with this special adapter at no extra cost, so if you have a brand new No. 260 tool, don't worry.





An X-Acto oiler makes the job of lubricating your car a precision breeze! Just 75c.



When the model maker gets really serious, a Moto-Tool is the first investment he usually makes. The most popular (and practical) is the No. 260 model, at \$22.95. This tool (reported on in the June, 1968 MCS) does everything including grinding, boring, polishing, etc. Available in a special case with a tremendous variety of abrasive bits, polishing wheels and similar items for

MANUFACTURERS

American Edgetool, Inc.
Dept. MCS
350 Broadway N.Y., N.Y., 10013

Dreme-Mfg Co.
Dept. MCS
2420-18th St.
Racine, Wis.

Moody Machine Products Co., Inc.
42-46 Dudley St.
Dept. MCS
Providence, Rhode Island 02905

X-Acto, Inc.
48-43 Van Dam St.
Dept. MCS
Long Island City, N.Y., 11101

Walter Kidde & Co., Inc.
Dept. MCS
675 Main St.
Belleville, N.J., 07109

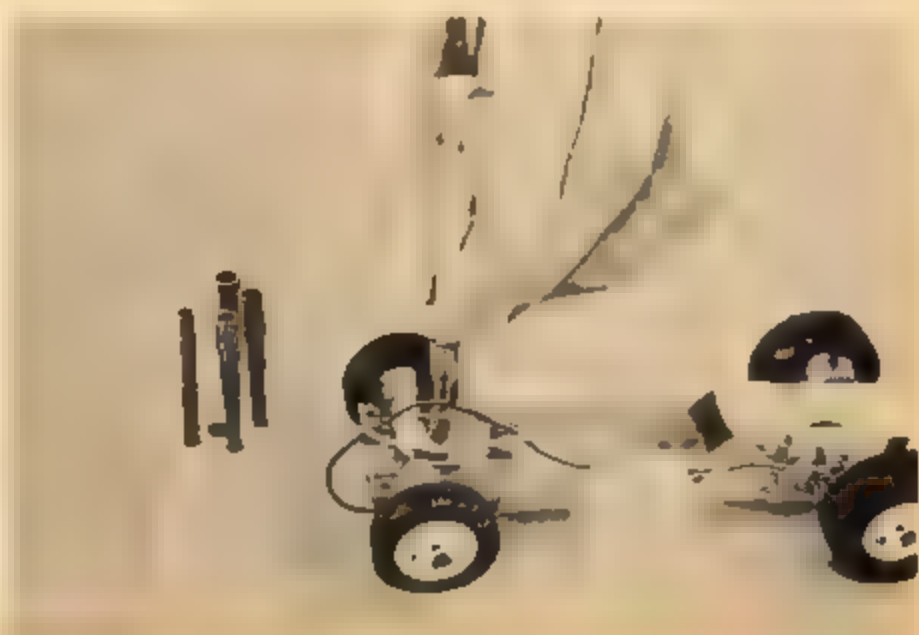
Adel Tool Co.
Dept. MCS
Chicago 31, Illinois



While a can of spray paint can hardly be classified as a "tool" it is definitely one of the most important items in the model maker's arsenal. A tremendous variety of spray paint. In both enamel and lacquer is

available from AMT, Pectra, Testor and in paint, hardware and auto parts stores under various trade names. Regular automotive touch-up spray (Dupli-Color etc.) are great for model building.

Moody's 9W-5 socket wrench set makes handling those small hex nuts a breeze. Offers precise tightening too.





X-Acto's vast range of clamps and tweezers will hold anything to anything! You simply have to have their catalog. Send for it! The address is listed elsewhere in this article.

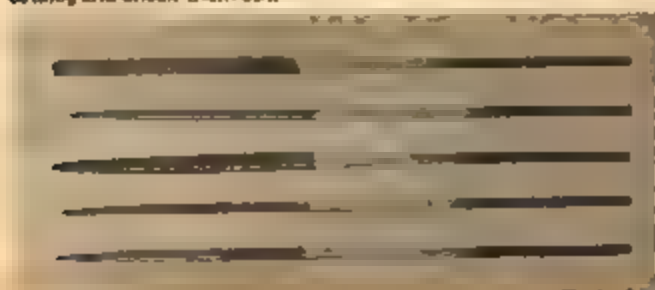


American Edgesteel makes a great 4-in-1 tool that forms, bends, punches, and you name it! Also, this great sheet metal brake, for folding up your own chassis. Write directly to them for price and further information.



X-Acto's 50-ST hammer set is invaluable. Inexpensive too, at \$3.00.

A good set of files is a lifetime investment. X-Acto makes a wide range. Order their catalog and check them out.



If you'd rather bore small holes by hand, X-Acto has a hand drill for you. Drill No. 47N-ST, at \$2.75 is a lifetime investment.



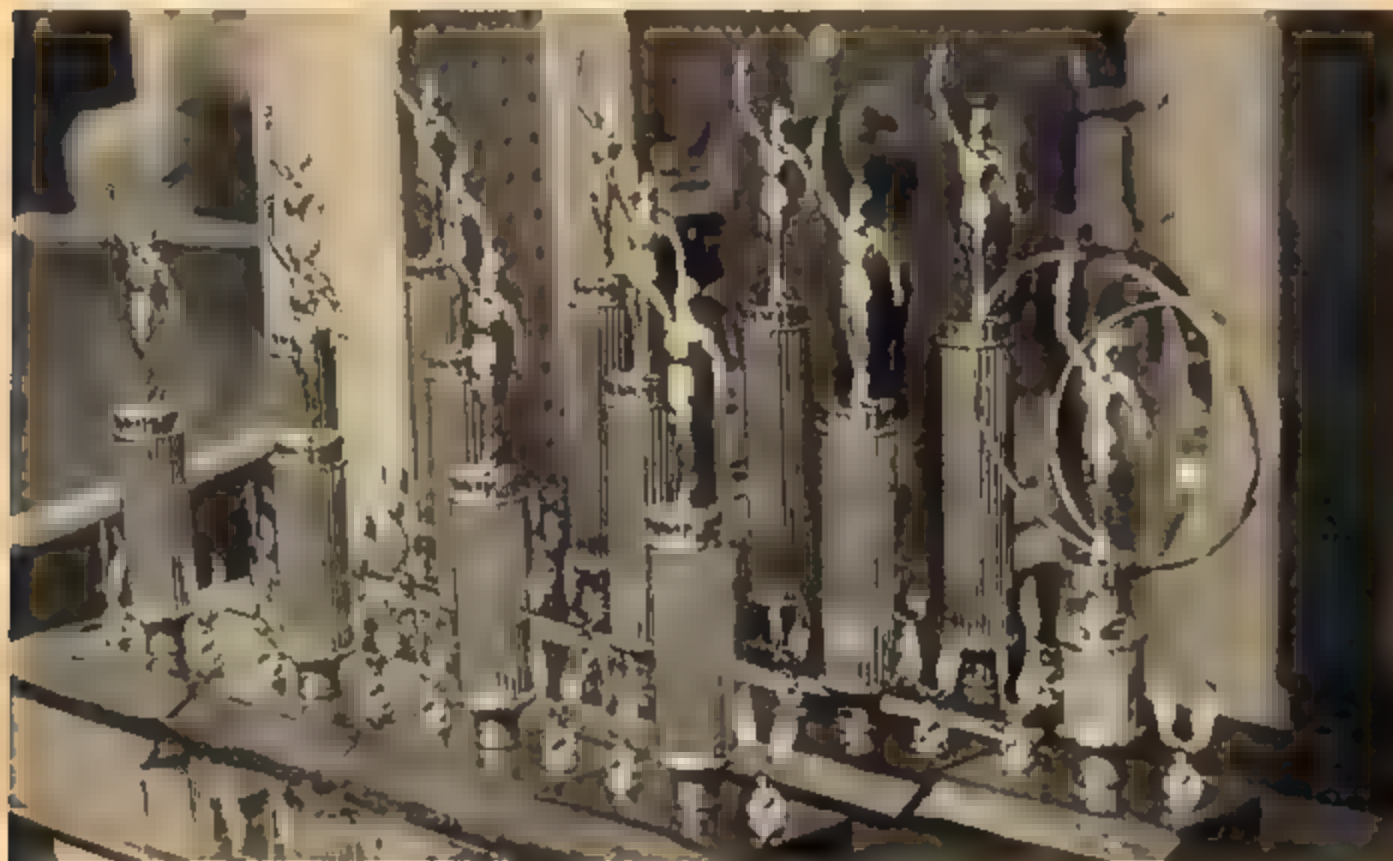
Pliers? Well, there's so many we don't know where to start. Order X-Acto's catalog and check them out.

Precision Pin vices for doing fine, slow drilling by hand, are available from X-Acto and Moody.



NAMRA WORLD

The third MC&S/NAMRA race for 1/32 Sports and GT machinery was a real battle, with the end of the NAMRA racing season in sight. The points race is getting tight!



Some of the Model Car & Science hardware.

WANT TO JOIN NAMRA? Write to this address for information. Please send a long, self-addressed, stamped envelope with your request.

NAMRA (North American Miniature Racing Assoc.)
P.O. Box 578
Times Square Station
New York, N.Y. 10036

Another NAMRA racing season is about to come to a close. The final area 10 New York race, the third in a season's series sponsored by *Model Car & Science* magazine, was held at the fast (and very popular) Gran Prix Hobby Center track in Upper Saddle River, New Jersey. This one was slated for 1/32 Sports and G.T. cars, and as usual, it attracted all the current NAMRA point leaders.

Top point man Roy Wong was in his usual frantic last minute state of putting all the loose bits together. And as usual, Roy always seems to have more loose bits than anyone else. By contrast, Charlie Cressi arrived with three superbly set-up cars.

Practice as usual was a shambles. Fred Harsh demolished a hand-carved balsa wood Cooper-Maserati when another car spun out in front of him in the fast sweeper. Bad luck, since the car was actually only being demonstrated. New NAMRA driver Elliot Welz was very impressive in practice with a healthy Lola T-70. NAMRA's final tech inspection closed with the usual, "... prove it and you can run it ..." statements, and then, with the settling of the dust from practice, the business of qualifying got under way. When this hectic portion of the day came to an end, ol' Charlie Cressi was top qualifier. He was followed by Elliot Welz, Jim McCormick and John Dillon. Thus was the foursome that would go into the main event.

Roy Wong, who surprised everyone by not making the main, was top man for the semi, followed by Fred Harsh, now composed once again after the

loss of his Cooper-Maserati, Jose Rodriguez, who now does not seem satisfied with just hardware for concours, and Ron Dodson. Wong's car was fast enough to make the main, but Roy seemed to be having some early morning trouble with his thumb.

Rounding out the field for the consie were Frank Bianchi, Chuck Hansen, Pete McCarthy and Bob McCarthy. The first race of the day, the consie, saw Bianchi's English-bodied McLaren get an early jump and then move out to a big lead in the early laps, thus confirming a Bianchi prediction based on some recent midnight oil burned in his home workshop. Hansen got his P4 Ferrari as close as 1½ laps away on lap 70, but could not close the gap. Father and son, Bob and Pete McCarthy were having a very unfamily-like bash for third spot. The final at the finish was Bianchi, Hansen, Bob McCarthy and

Pete McCarthy.

Someone once described a NAMRA semi as "four guys who come out of the slot one more time than the four guys who make the main." This 140 lap semi gave truth to that profound observation. Less than one qualifying lap separated the main qualifiers from the semi qualifiers. The first few laps saw Harsh's Ferrari move out to a half-lap lead, followed by Wong, Rodriguez and Dodson. Harsh's car handled beautifully in the turns but gave away gobs to Wong's Mirage in the straights. After 20 laps these two were locked in a "after you my dear Gaston" duel for first place. They changed places almost every lap. In the meantime, back in the pack, Rodriguez was making a big move and sneaked by both Harsh and Wong without their noticing it. On lap 38, Wong got his thumb going and got by Harsh and Rodriguez. Eventually getting two laps on both of them. Harsh was straining the works to stay within shooting distance of Rodriguez and poor Dodson was having pick-up problems which kept him out of the slot most of the time.

This order held until 105 when Harsh finally got past Rodriguez with an assist from Dodson, and took off after Wong. Wong's "tut-top" Mirage began to lose its grip in the corners and Harsh passed him on lap 125. Wong got it back on lap 130 again, and Harsh was only three feet back when Wong took the checkered flag. Sneaky ol' Jose was also charging, and finished a few feet back of Harsh. Three cars in the same lap after 140 laps of all-out racing is some cliff-hanger!

With the call for drivers for the main event, Charlie Cressi threw off his lap robes under which he had been faking a cold, and was the first man to plug-in. And the start of the main saw Charlie get off with a start that put him in a class by himself. He was going ace the hammers around Gran Prix's tricky layout and it is doubtful whether anyone in this world at that time could have stayed with him for the first 80 laps. Elliot Welz was 3 laps back in second spot. McCormick was in third and lead-thumb John Dillon was nursing a suddenly sick motor in fourth.

On lap 85 the porch fell on Charlie. He was banged rudely into the wall by an unknown assailant and this shunt made feathers out of his pick-up braud. Five laps later he lost first place to Welz. Another five laps and he lost second place to McCormick. Then, a quick pit-stop got him going again and he began to move back up. About this time, Welz was in the pits himself with braud trouble, and McCormick flew by into first.

With 20 laps to go, Welz and Cressi were glued together and were moving up on McCormick. When the checker fell it was McCormick by half a lap over Welz followed by Cressi, only inches away. And a last-second, all-out attempt by Cressi sent his car deep into the wall to inspect the wood grain. It was an exciting finish to the 1967-68 area event. The next big one will be the Regional meet for 1/32 GP cars. A full report next month.

Top ten NAMRA Point Leaders to date

1. Roy Wong	572
2. Charlie Cressi	535
3. Fred Correntu	432
4. Steve Nielsen	425
5. Jose Rodriguez	311
6. Frank Bianchi	304
7. Pete McCarthy	300
8. Jim McCormick	277
9. Robert McCarthy	205
10. Sandy Gross	165



Consol winner Frank Bianchi

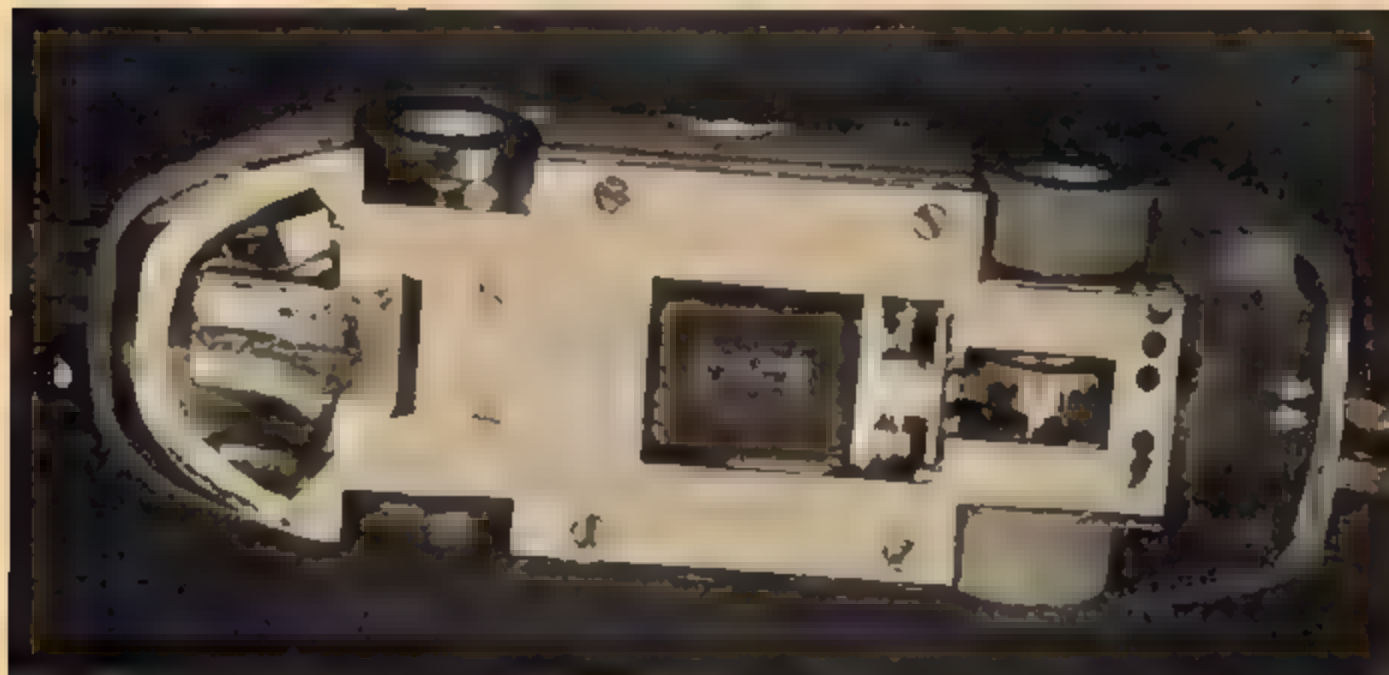


The Bianchi McLaren: top and bottom.





The Rodriguez Honker top and bottom.

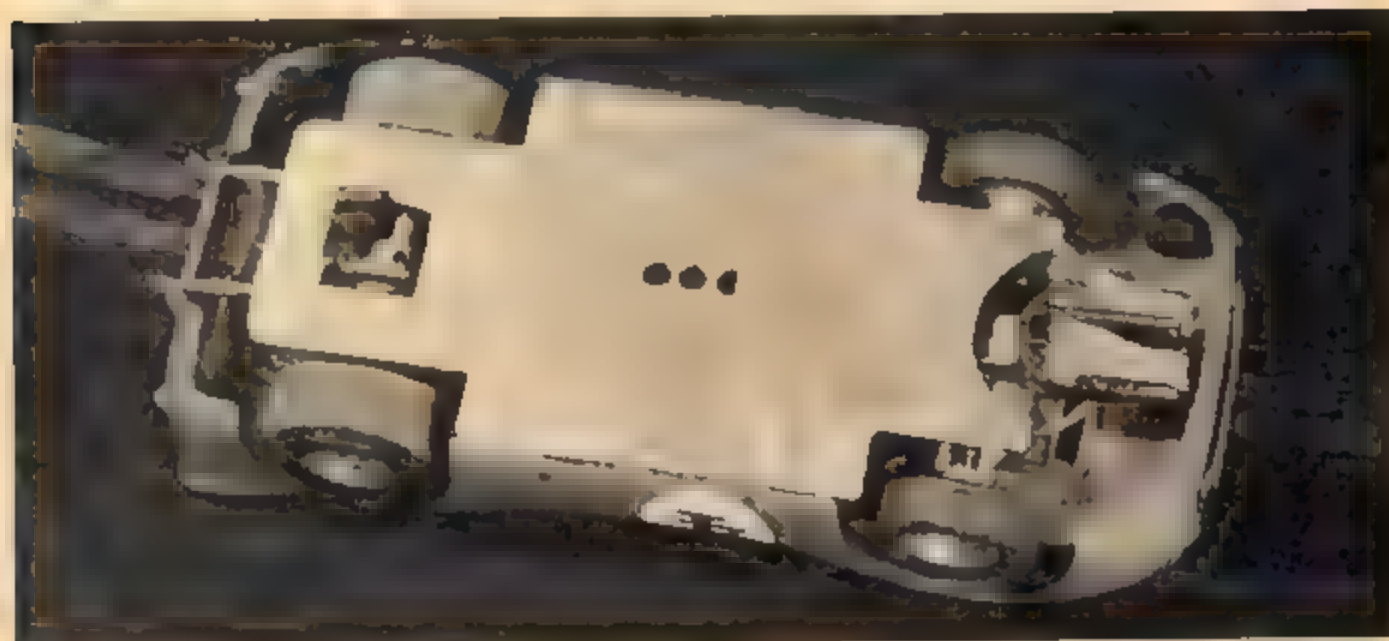


Semi winner Roy Wong.



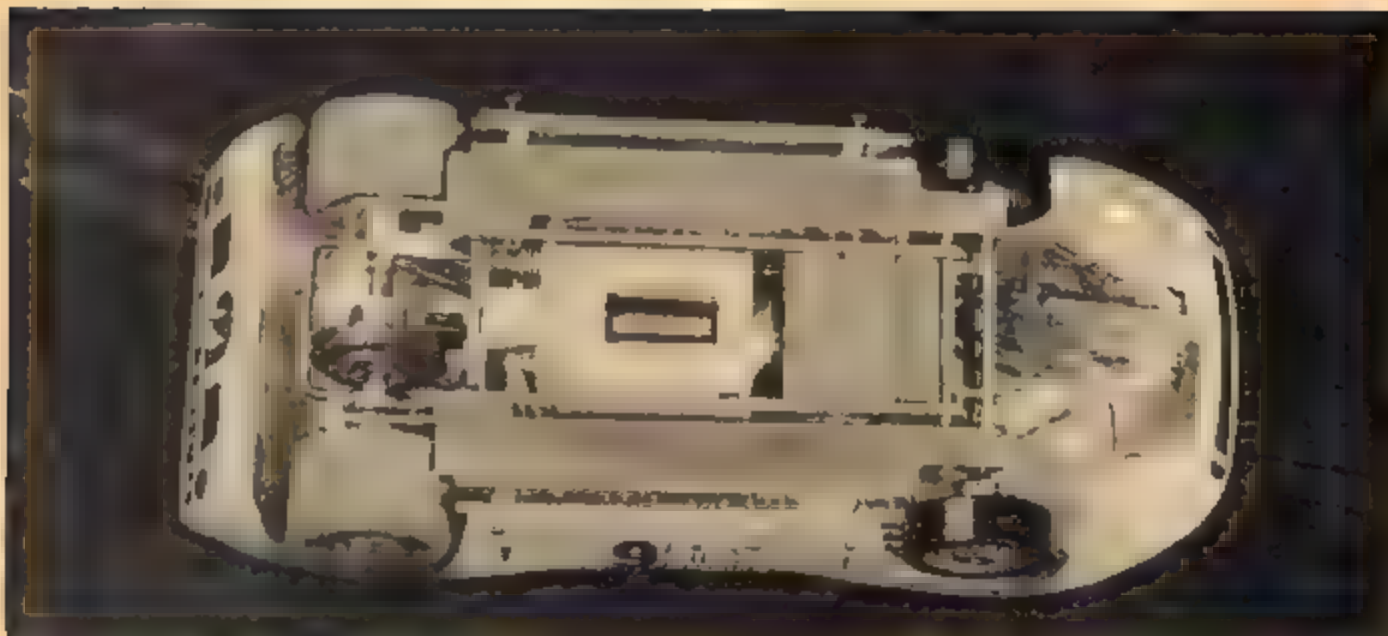


The concourse car Rodriguez Ferrari P4.



The Cresti Ferrari P3, before bout with wa





Roy Wong's tilt-top Mirage chassis. It works!

Hand-made McCarthy Ferrari Can-Am.



Main winner Jim McCormick





This 2200-lb., 96-inch wheelbase car, powered by a 327 Chevy engine, can do 133 mph and 10.67 in the quarter-mile.

That little car you see pictured on these pages may look like a toy, but would you believe it has clocked speeds in the quarter-mile of 133 mph and an elapsed time of 10.67? The 2200-lb. car, which has a 1938 Fiat body and is powered by a 1967 Chevrolet 327-cubic-inch V-8 engine, competes in the B/A class in drag racing.

Owned by Buddy Anderson of Dallas, Texas, the car has done well



FAST FIAT



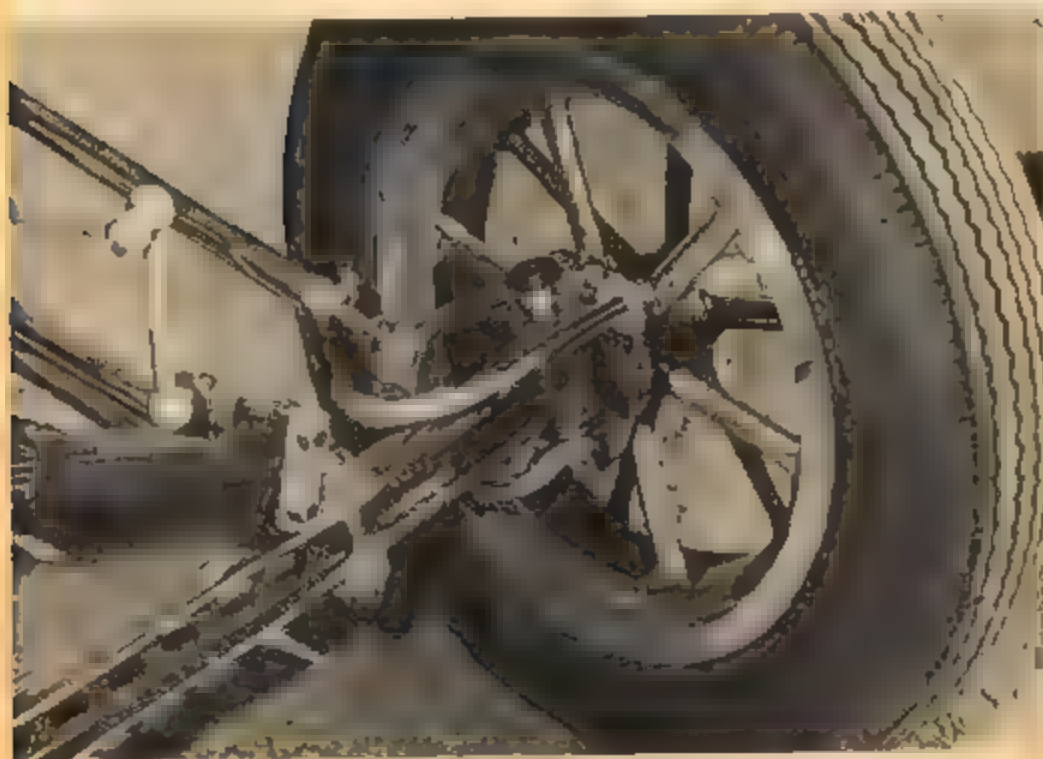
In competition for several years. The engine features Iskenderian pushrods, lifter and cam and has Venolia pistons and an Enderle injector. A B&M hydro and Vertex magneto add further to the performance goodies.

In the chassis department is a 1931 Model A Ford frame and a 96-inch wheelbase. Front suspension is stock Ford, while the rear was custom built.

Steering wheel is by Croger. A B&M hydro transmission is used.



Suspension modifications include Corvair springs.

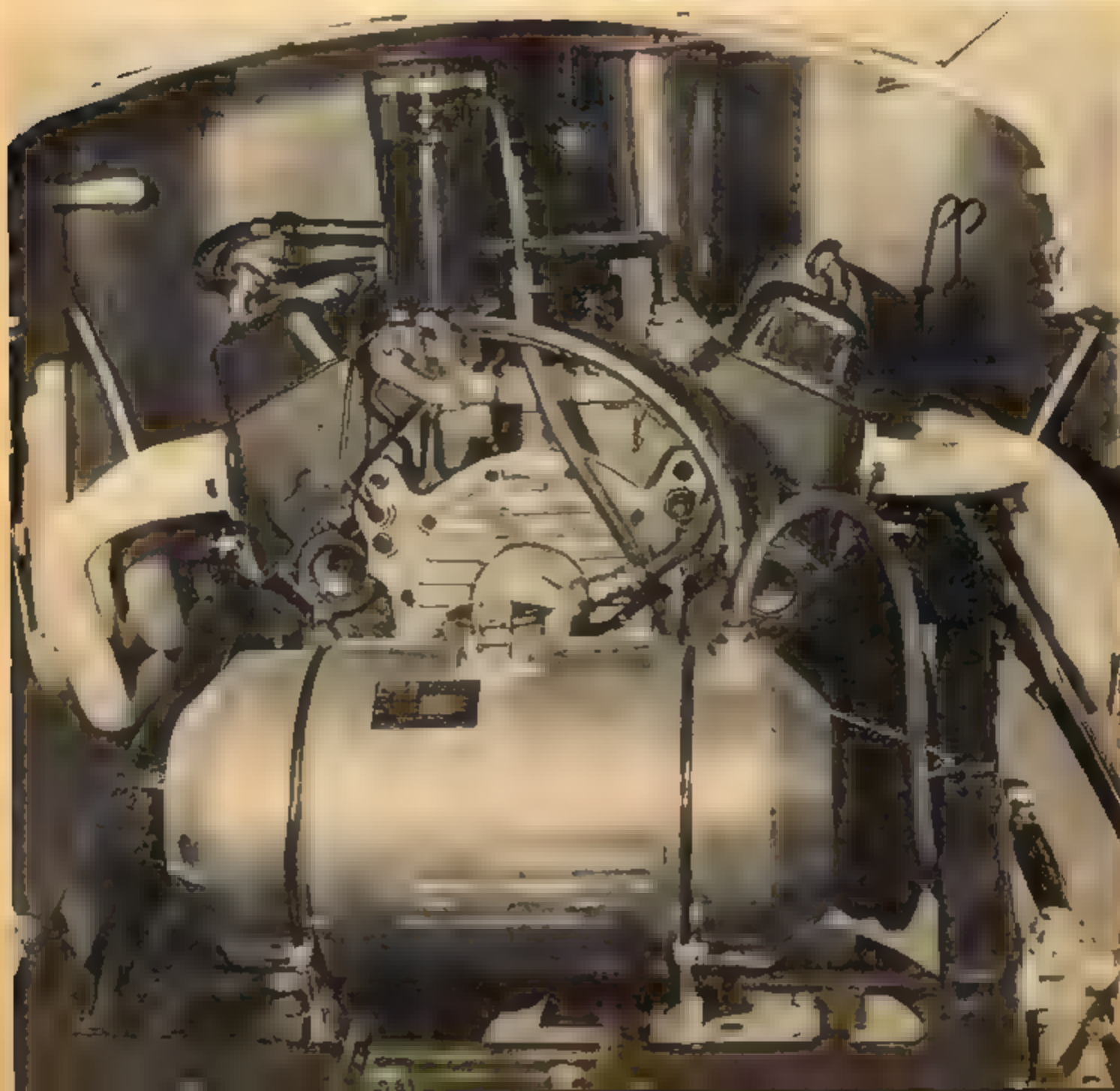
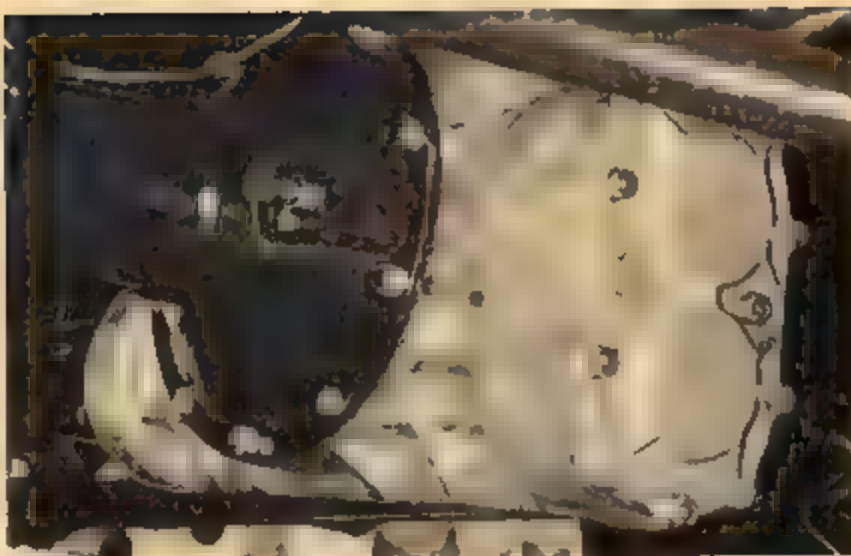


Headers were custom built by the car's owner, Bobby Anderson of Dallas, Texas.

Front wheels are by American Racing with Firestone tires. Front axle is from Model A Ford.

Quick-change center section is by
Halibrond M&H tires are in rear

Chevrolet 327-cubic-inch V-8 engine
powers the little Fiat Enderle port
injector and Esico tank are used



THE ATLANTA ARCO



By Ray Gardner

Stock car racing, Georgia style

Bob Cozine destroyed a myth, astonished the crowd, and set a new lap record for the American 150' Red Track. The myth was that stock cars with a 4½" wheelbase were not as fast as GP and sports cars. The place was Williamsburg Raceway in Atlanta. The race was the second in the series of 1968 Arco races sponsored by Champion of Chamblee. His new track record... and with a stock car... is 5.99ET. He then went on to win the Main by 14 laps over his nearest rival Tom Thornton. More about this later.

On Saturday, March 30, 41 drivers turned in their best building efforts to Captain Jack Lane of Team Champion. He checked the cars to see that all conformed to the Champion rules. The cars then were judged for Concours and Bill Earnhardt of Atlanta won the plate and the money for his hard plastic Charger R/T which had eight coats of clear hand-rubbed lacquer over the decals and paint. Young Benny Collett of Atlanta was second with his blue Petty

Plymouth and Bob Kennedy of Indianapolis was third with his new lightweight DuBro Oldsmobile Toronado.

Qualifying looked good with no exceptionally fast runs until Cozine stepped up and plugged in his new Cox Mark 3-A hand control. Jack set Bob's car, a Ford Fairlane, down on the blue lane and you could have heard a pin drop. All eyes were on the little red rocket as he practiced. The clocks went on and the first lap was an incredible 6.04. A few more laps in the low sixes and then Tom Thornton, who was operating the Champion timers, yelled "5.99!" Pandemonium! When the applause died down, Bob tried several times to go faster, but couldn't squeeze any more out of it, so he turned the track over to the next qualifier. How'd you like to follow that act?

When qualifying was over, Cozine was first, Billy Tempel had turned a 6.24, Wade Holt a 6.28, Tom Thornton a 6.35, Ray Gardner 6.44 and H. L. Davis 6.45. These six had automatic sit-out spots for the Main. The

next six fastest qualifiers—Phil Kilian, Bob Kennedy, Nicky Strange, Jack Lane, Roddy Presridge and Benny Collett—had sit-out spots for the Semi. Since only the top 38 qualifiers run in an Arco race, the remaining 26 were put into the Consolation races to try to work their way up for the remaining berths in the Semi and the Main.

The beginning of the Main was marred by two false starts due to an error made by yours truly. Seems I was so excited, I forgot to turn on the lap counter once and forgot to advance the counter programmer on the second one, so I gratefully stepped down and handed the microphone back to Tom Thornton. Things smoothed out considerably and the eight cars roared around the track for the first eight-minute Consy. Frank Kelly came out on top with Buddy Rushing second. They advanced to the next Consy and Frank again came through the winner, this time with Fritz Wilson second, driving a wild looking Plymouth with

flowers painted all over it.

The third Consy saw Kelly finally lose out in the third heat when he went into an adjoining lane, then into the wall. Phil Killian injured his hand trying to save the car from destruction. Fritz Wilson went on to win that race with Russell Meyer only inches behind him. They moved up to the next Consy and the speeds were getting faster. Rick Jordan of Atlanta jetted away at the beginning with Charles Dempsey right behind him. After the first two-minute heat (four heats per Consy), they were still on the same lap with Gary Thomas and Ken Early less than a lap behind them. Dempsey broke a lead wire and Gary Thomas moved up to take over second, with Jordan winning that Consy by three laps.

Moving into the Semi, Jordan and Thomas raced against Killian, Bob Kennedy, Nicky Strange, Jack Lane, Roddy Prestridge and Benny Collett. Jordan took the first five-minute segment by a full lap over Kennedy and Lane but went over the wall later and out of contention. Collett and Strange had problems with gear mesh and Kennedy and Lane went on to finish first and second and the end of the 20-minute Semi.

The 40-minute Main (10 minutes on four different lanes) started with Cozine on red, Tempel on white, Hoit on green, Thornton on orange, Gardner on blue, Davis on yellow, Kennedy on purple and Killian on black.

Jack Lane, although he qualified to enter the Main by finishing second in the Semi, withdrew and let Killian, who was ninth (third in the Semi) run in his place. Jack, being race director for the series, and always a true sportsman, stepped down because there was no one else capable of running the Main since Thornton and I were already in it.

Tom Thornton and Mr. Davis were battling it out for first place while Cozine just played it cool up there on red. Finally, about halfway through the first heat, I perked Mr. D. in the circle and Cozine passed him. Tom finally came out of the slot once and Cozine ended up winning the first heat. He won all four heats, but had not expected to take the one on red. The second heat started with Tempel out. He had blown a motor early and retired. Then mine quit in the bank and I went to change it. Killian broke a guide flug and pitied for repairs. Mr. Davis went over the wall and dropped back a few laps. It appeared to be a race for third place on down, since Cozine and Thornton were far out front holding onto first

and second. The third segment started with Tom trailing Bob by three laps. Kennedy was making a desperate bid to try to overtake Tom but he just didn't quite have enough steam. The power went off at the end of the 40 minutes with Cozine showing 352 laps for the win. Thornton was second, Kennedy third, Killian fourth.

Mr. Davis, while fifth over all, was the highest placing Independent in the Main, so he received his award. (Champion has wisely separated the racers into two classes now. The factory-sponsored pros have their own awards and money and the Independents have theirs. If enough entries warrant the running of two races, the Independents will race first, the pros second. Since there were not enough entries to warrant two races here, they were run together, as they were at the Florida Arco.)

Amazing as it sounds, this was the

best, cleanest, fairest Arco race to date. No car was completely destroyed. There was less perfling than at most sports car races. There were fewer comments made to turn-marshals. There was no complaint about the way the race was won nor protests about the outcome. I'm a little sorry to hear that there will be no more stock car races. But Captain Jack has decided to make all the Arco races from now on Group VII (open cockpit) sports cars. This is to ensure that more will enter and compete. The next Arco race will be at Tom Thumb East in Columbus, Ohio, on May 18. It was originally set up to be Indy-type cars. It's now sports cars. By the way, for those of you who are interested, all 41 stock cars at this past Arco race used floating body mounts. See the chart for other pertinent details.

Be sure to enter an Arco race if there's one in your area. Believe me, you'll learn a lot!



Allen Murphy, Frank Kelly, Terry Lee, Bob Parks, Buddy Rushing, Jim Britt, Steve Parrish and Jerry Plumber wait for the power to come on for the start of the first heat. Ray Gonzales waits at the head of the straight to marshal that turn, while Mark Williamson marshalls "The Hurt" (or "Dead Man's" turn).

Bob Cozine's "Brick" (an almost all piano wire chassis) was fast qualifier, and finished first in the Main.





THE LATEST IN 1/32 CHASSIS

The Midwest "brass benders" have come up with a new club chassis that is as fast as it is wild looking!

Robert Schleicher

I'll walk right out on the limb this time and state my opinion that this is the very best chassis design yet devised for 1/32 scale club competition. The design was suggested to me by Glen Seegers of the Chicago-suburb-base club group previously known as 32RA, but scheduled for a name and organization change. Glen does not claim the design himself, since it apparently evolved from the efforts of the very active and successful group of midwest clubs.

The chassis does seem to take advantage of every feasible technique yet devised for damping out vibration and for lowering the center of gravity, with the unusual "self-steering" front end thrown in for good measure. I have replaced the popular midwest pin guide and plastic mounting block with the more universally popular pivoted guide shoe and made use of a host of commercially available brackets to allow as much ease of assembly and adjustability as is practical. You can com-

pare the photos of one of Seegers' chassis on page 48 of the May, 1968 MC&S to see what changes have been made.

The chassis main point of interest is the self-steering front end, a purely Midwest creation. The wheels are pivoted at or near their center line to "caster" like the wheel on those one-wheeled trailers you see in real life. This reduces the amount of friction in the corners as each wheel automatically finds its own path of least resistance, taking much of the deslotting strain away from the guide shoe.

The motor is mounted on a separate pan that is screwed loosely to the rest of the chassis to help isolate vibrations. The angle mount of the motor provides the torque-cancelling advantages of the more conventional parallel sidewinder without the need to cut the motor width down. Yes, the gears do mesh well after a few laps of break-in.

I have utilized the Dynamic guide

or connecting arms front and rear to provide easier alignment when some degree of adjustability is desired. One of the failings of many home-made chassis is a lack of adjustability or interchangeability of parts. Here, the guide length can be adjusted as necessary using either the new trailing Cox guide shoe as I have, or substituting a more conventional shoe. The rear brackets allow gear changes ranging from 3:1 to 6:1 by using a 6, 7, 8, 9, or 10 tooth pinion gear with a 32, 34, and 36 tooth spur gear. The corners of the motor are ground away slightly to clear tires, body mounts, and axle bracket. This does not damage the motor, so it can be used in a conventional chassis later if you wish. Replacement of the motor is quick with the new one only needing the minimal amount of modification, a very handy thing as new ideas are found worthwhile in motor windings, magnets, etc.

One of the nicest features of this particular chassis is its adaptability.

The assembly screws can be tightened down to lock either the steering front end or the loosely-mounted motor pan. I intend to provide a similar "lock-in-or-out" mounting for the body for this car, which we'll show you in next month's feature on detailing the MkVI McLaren in 1/32 scale.

BILL OF MATERIALS

BUZCO:

1 #234 front "Wheelies" (pr) \$2.29
1 #226 rear "Wheelies" (pr.) 1.19

COX

1 #3837 "Super Cuc" guide .50
1 #3315 36 tooth spur gear .30
2 #3285 thrust nut .20
1 #4220 wheel spacers (set) 10
1 4019 7 tooth pinion gear .25

Champion:

1 set Concours D'Elegance inserts .25

Dynamic:

1 #641 ground axle .29
2 #642 ground axles .58
1 #402 body mounting bracket .25
1 #580 roller bearing front end 2.49
1 #587 Dynaflex front end .89
1 #542 alloy connecting tongue .59
1 #541 brass connecting tongue .49
1 #403 outrigger body mount .79
1 #741 5-40 brass nuts (pr) .05

HS:

1 #R-3371 chassis with motor 4.00

HS:

1 piece 3/32" square brass tube .30
1 piece .032" x 2" brass sheet .75

Lancer

1 #359 McLaren body kit 1.39

TOTAL: \$17.94



Extensive use of commercial parts allows easy replacement of each component, speeds assembly, and provides adjustability. See the bill of materials for list and cost.

A vise must be used to bend the steel axles for self-steering front end. Grip the threads of a hardened axle and bend

Final angle of each axle can be adjusted by gripping axle as shown. Careful not to bend near threads or the axle will break.





A cutoff wheel in a hand drill or a motor tool like Dremel's must be used to cut the hardened axles so only about $\frac{1}{8}$ " of thread remains on each end.



Only the brackets from the #587 Dynamic bracket are used with the axle bearings from the Revell chassis, a thin nut, and Buzco's new ball bearing front wheels #234



Hold axle in pliers and use an eraser to twist the center of the Buzco ball bearing front wheels onto axle. A wrench won't do.

Only the axle end of the Revell #R-3371 chassis will be used (with oilite bearings fitted to front axle pivots). Other brands of brass brackets could be substituted if they'll fit motor you have selected.



A deep notch must be filed into the #580 Dynamic bracket to clear corner of motor. See photos of finished chassis for shape.

Corner of motor and much-chopped Revell bracket are removed to clear #580 Dynamic bracket.





Assemble each front wheel, rear axle, and #542 Dynamic connecting tongue with Cox #3837 trailing guide shoe. The empty Dynamic #587 bracket will connect motor pan and guide arm to chassis.



Lay the axles, guide, and motor on chassis to check clearances and mark lines to match photos. Cut using a thin jewelers saw. In either a coping saw or jewelers saw handle.

3.32" holes in each front corner give correct front wheel location. 1/8" holes are countersunk at both ends of motor part of pan and in front of pan to fit. Holes at sides are 1/16" for body mounting plates.



Use a metal ruler and a pointed scribe, or old compass tip, to scratch the outline and wheel base (axle center lines) on the K&S .032" x 2" brass sheet. Keep all lines perfectly square so chassis alignment is OK.



3/16" of each edge of pan (but not front corners) is bent at a 45° angle to stiffen sides and lift body mounting screws above track surface.

A short piece of the #541 Dynamic brass connecting tongue is soldered to rear of motor pan to a low adjustment and alignment of axle bracket. Motor mount is soldered on edge to plate. Use hot soldering iron.





Revel axle bearings are soldered to front corners to serve as pivot bearings for self-steering. K&S $3/32$ " square brass tube reinforces pan and overlaps to align the motor pan within vee notch of chassis.

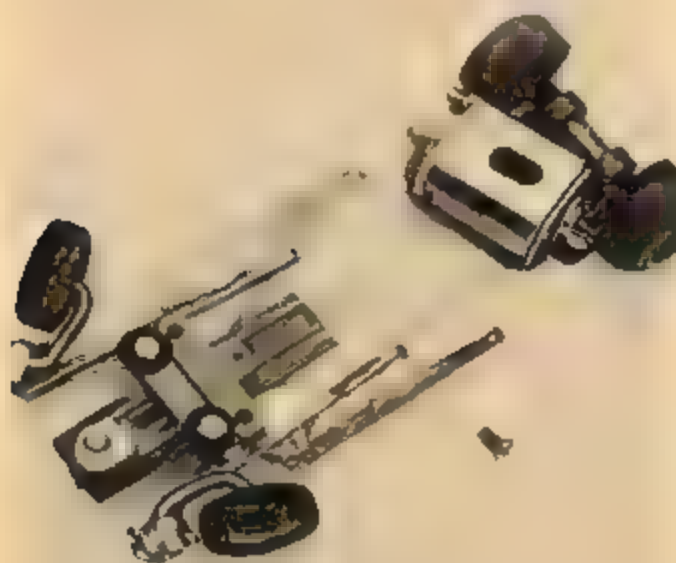
Front and rear halves of chassis are assembled here to clarify how the motor pan is free to pivot a bit as a separate subframe. Damaged screw holds it to frame.



Dynamic #402 body mount bracket is mounted on shortened and thinned-down #542 tongue to serve as inner stop for front wheels. Cox guide is rotated out here to show how it was hacked down to clear half-circle cutout in frame.



Threads of all assembly screws can be lightly damaged with cutters so they will stay in place about half tight. This allows loose motor pan and front wheel pivots. Frame is complete here, less motor lead wires and body mounts.





#403 Dynamic body mounts are gripped in vise and pried out to a 45° angle. Each bracket is then shortened and three tabs removed as shown in next photo.

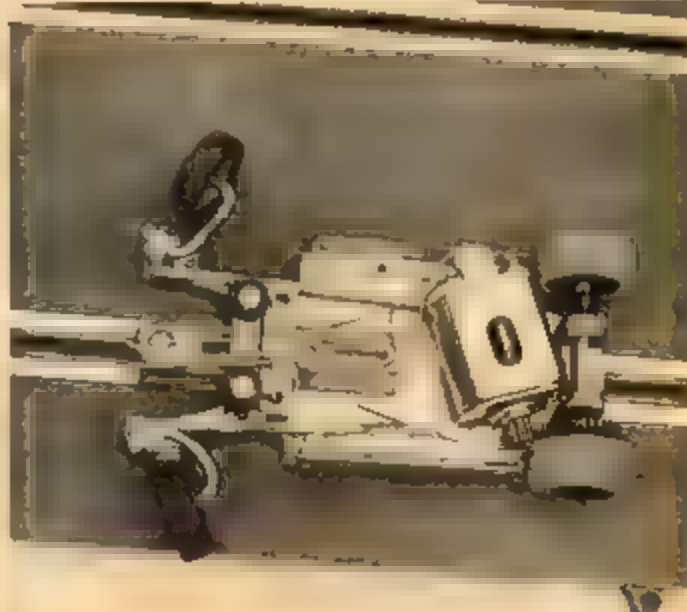


Pickup lead wires are tied to bracket so they will serve to center the pickup shoe. Chassis is complete here with mounts ready for clear plastic body.



Action of self-steering front wheels in a corner is indicated in this photo. Car will stay in slot at faster speeds because side strain of front tires is reduced.

A quick stop at the end of a straight can produce this effect at front end. Pins can be so deroed to act as stops if swinging out is too severe.



THE WORD FROM THE WEE WORLD



There's gonna be a big race at the Hobby House come July 27. The race will be sanctioned by HOCCI and will be a mail-in affair similar to the 1967 Invitational held at Mini Wheels Raceway last November. Unlike the Invitational however, this race is only the first of three races counting for the 1968 HOCCI National Championship. These three races make up what is called the "MC&S-HOCCI Challenge Cup" series.

The Hobby House track is the standard Aurora 6-lane commercial racing table. Drivers will be local Monroe, La. hot-thumbs and Richard Harrison will oversee the entire shooting match. Yours truly will make the trip to cover the event for MC&S.

All HOCCI members are eligible to compete in the event. Separate races are planned for all classes in both Stock and Modified Divisions. If there are not sufficient entries in one class to bother with a separate race, it will be combined with another class. A concours event is also planned.

To enter the race

(1.) Carefully pack all the cars you wish to enter in a box (there is a limit of one car per class for each racer). Each car should be accompanied by a small slip of paper identifying it as either Stock or Modified.

(2.) PRINT your name and address on a small (about 3" by 2") piece of

paper. This is your mailing label, so make it legible. On another little piece of paper put your HOCCI number. Stick both pieces of paper in the box. (3.) Go to the post office and buy exactly twice as many stamps as it takes to mail the box to Louisiana. Put half of the stamps in the box along with the rest of the stuff and put the rest of the stamps on the box, seal it, and mail it.

(4.) Richard has moved the Hobby House to larger quarters, so please take note of the new address: The Hobby House, 1312 North 18th, Monroe, La. 71201.

(5.) All cars should be in Monroe by July 20 because qualifying heats will begin one week before the feature race July 27. Late entries will not be qualified.

A few other points of interest about the race

(1.) This is a race and therefore open only to HO race cars. Please keep your Batmobiles, station wagons and dune buggies at home.

(2.) Sorry, drag racers, but this first race will be for road racers only because Richard doesn't have facilities for a drag event. Don't despair, though, the second and/or third race in the series will be a combination road and drag event.

(3.) Let's all try to get numbers on our cars before the race. It's ridiculous in this day and age for an HO race car not to carry numbers, especially since the advent of the Auto World decal sheet. Frankly, some of the cars that showed up for the '67 Invitational were pretty scruffy-looking. You'll never see cars without numbers at a NAMRA like a decent race car.

(4.) All HOCCI car specifications will be followed to the letter. Any car that fails Tech Inspection will be disqualified on the spot.

(5.) Points will be awarded to the top eight finishers in each class according to the official 8-7-6, etc., HOCCI system. At the end of the series the racer who has accumulated the most points in all classes will become the 1968 HOCCI Road Racing Champion and will receive the MC&S-HOCCI Challenge Cup trophy. There will be no trophies for the individual class high-point men. The big prize is the overall, winner-take-all trophy.

(6.) The second race of the series will be held at either the track of the HO Competition of Elwood, Indiana or at my home track, the Spartan International Raceway. Race date will be sometime in October. Mini Wheels raceway in New Jersey will host the



third race in December

(7.) In 1969, we plan to extend the series to six bi-monthly mail-in races (one each in Feb., April, June, Aug., Oct., and Dec.) To do this we will need three more large, six-lane tracks suitable for an event of this caliber. Anyone wishing to host an MC&S-HOCCI race should get in touch with me mucho pronto.

If you are within driving distance of Monroe, by all means drop in on Saturday, July 27 and we'll have the biggest "HO-in" of all time. The rest of you guys tune up your cars and get 'em in the mail before the deadline. When I get to Monroe, I want to find at least 1,000 cars waiting for me.

PROBLEM. How to make Can-Am cars and Formula One cars in HO without obvious bloating of the bodies to clear the running gear.

SOLUTION: Two new chassis.

SPECIFICATIONS FOR our "dream" CAN-AM CHASSIS

(1.) Motor: "Can" type. 3/8" high by 1/2" wide by 5/8" long.

(2.) Frame: Metal, pan or rail construction.

(3.) Gears: Set-screw nylon. Variable ratios available.

(4.) Wheels: Set-screw aluminum. Four, five and six spoke "mag" styling.

(5.) Tires: Rear—3/4" tread surface, 1/4" diameter silicone or silly-coated sponge.

(6.) Track: 1-1/4" at outside edge of tires.

(7.) Wheelbase: Two—1-3/16" and 1 1/2".

(8.) Ground clearance: 1/32" from bottom of chassis to top of truck rails.

SPECS FOR F1 CHASSIS

(1.) Motor: Round, "cigarette" type. 1/4" to 3/8" diameter by 5/8" long.

(2.) Frame: Plastic, "monocoque" construction. (3,4,5,6,7, and 8.) Same as Can-Am chassis.

COMMENTS: The only hope for Formula One cars in HO lies with some type of cigarette motor. None of the existing HO motors can accommodate an F1 body without bloating it way out of proportion. Both Tyco and Aurora have tried, but the resultant "cars" looked more like the Goodyear blimp than F1s. Even with the smallest possible cigarette motor, the bodies won't be anywhere near scale, but then true 1/87 scale doesn't exist anyway. The power output of the cigarette motor wouldn't matter, either, since all F1s would have the same size motor (Tyco's monster Lotus and BRM would have to be outlawed). The important thing is that the bodies be proportionate and look like F1s.

The specs for the Can-Am chassis should bring in a few letters. I anticipate being told that set-screw wheels and gears are impossible in HO. But neither press-on or thread-type set-ups hack it, so what does that leave but itty-bitty set-screws?

Anyone who has tried to mount a Lancer Lola or McLaren can testify that a much lower chassis is needed. The armature gear of the T-Jet sets smack in the middle of the cockpit, leaving no room to mount a driver (if you can find one to mount).

The metal pan or rail construction is only a suggestion. If the motor has any power at all, metal will be needed to hold things down. If plastic works okay, fine. The important specs are these: small can motor, crown and pinion gear system, and low-profile chassis. In other words, I would like to see a scaled-down 1/24 chassis.

Q. Would you lay off Aurora?
A. No.

Q. Would your review of HO Car Model Racing have been as critical if the editors of MC&S had put it together rather than Car Model's editors?
A. All other things being equal, yes. I was not being purposely malicious to the CM boys in the review. I honestly thought the book was poor, an opinion shared by the majority of those who write me.

Q. Where can I get Faller equipment?
A. The sole U.S. importer for Faller's German-made equipment is the Charles G. Merzbach Co., 95 Fifth Avenue, New York, New York 10036. For .75 they will send you their giant color catalog.

Q. Did you ever stop to think that maybe some of us like Batmobiles and station wagons? Would you believe my stock Batmobile pulled a .32 second E.T.?

A. Why mercy yes. Everybody knows Batmobiles are atomic-powered. I'll bet if you put on a pair of red silcones, you could pull .1 sec.

Q. Isn't the Aurora GP Racer a Formula One?

A. No, the GP Racer is a 100% pure thingie, the reason being that it is an original Aurora design and not modeled after an actual F1 prototype (Honda, BRM, etc.).

Q. Re the times of Carl Dreher you printed in the May MC&S, since when do we divide the 1/4-mile time by two to get the 1/2-mile E.T.?

A. Sorry about that, drag fans. I must have received a dozen letters informing me that my "simple extrapolation" went somewhat awry. In defense, I can only say that I got careless, because I knew full well that it takes longer to do the first quarter than the second.

La Ganke has a new Tiger catalog out for the speed enthusiast and it is utterly fantastic. I counted no less than 40 individual hop-ups for the T-Jet.

Some of the accessories are brand new and more than worthy of a mention here. The new No. 310 Tiger Mags (super magnets) at .69 a pair are especially exciting. These come "super-saturated and color coded." La Ganke claims "increased acceleration and better braking."

The new No. 276 silver-plated armature should help the performance of home rewinds (it goes for .70.) Also for the home rewinder is a No. 278 bare armature (or rotor, as La Ganke calls it) for .70 and a No. 146 pin vise (used to hold the armature while winding) at \$1.80.

For the drag-racer, La Ganke has a pre-fab rail front end No. 148 for \$1.50 and a No. 147 Tiger Wheelie Kit (for wheel stands) at \$1.50. Three sizes of Tiger Paws (silicone slicks) are available now, the No. 137 small pair (for stock wheels) at .39, the No. 132 large pair for Hotrod wheels at .39, and the No. 145 super pair at .59. The Super Tiger Paws should really get the power to the ground, since they measure over 1/2" wide!

All this is in addition to the pages of other outsize stuff including aluminum wheels, threaded axles, jam nuts, a long-awaited wrench for the 0-80 nuts, the Tiger Hop-Up kit, the famous factory rewinds, silver brushes, hi-copper brushes, shims, brass axle spacers, Tiger Tails, rewind wire (from No. 35 to No. 39), silver pick-ups, weighted pick-ups, etc.

The catalog also contains a nifty table of recommended home rewinds which lists 280 turns of No. 37 as

being the best all-round and 200 of No. 35 for super-hot drag-racing. I agree.

You can get a copy of the catalog and two La Ganke decals from La Ganke Racing products, 670 South Green Road, South, Euclid, Ohio 44121 for .25 to cover postage and handling.

My hat is off to Tim La Ganke for all these beautiful Tiger accessories. HO needs more manufacturers like him.

TIPS FROM RICHARD HARRISON

(1.) Replace the idler gear every three hours of running because the hole wears out and the gear gets sloppy, binding against the armature and driven gears.

(2.) To lower the c.g. cut off the plastic neck housing the cluster gear shaft, push the drive pinion up almost against the gearplate (but make sure it clears), and drill new axle holes 1/16" above the stock holes.

(3.) If your hobby shop got hold of a batch of "bad" silver brushes, try hi-coppers, or as a last resort, stock coppers. Silvers are best if you can find a good pair.

(4.) To get better magnet saturation, sand the paint off the pole ends of the armature.

(5.) When shimming magnets, get as much metal behind the mag as possible, not just one layer. Best method is to put one big shim around three sides of the mag (every side except the front) and then stuff as many small shims behind the big one as you can.

(6.) Recommended wind: 300 turns of No. 38.

RUMOR HAS IT THAT.

... Champion of Chamblee (can you believe?) is seriously considering entering the HO market. I have it from a reliable source that they just might, if and when they catch up on their 1/24 back orders. They still haven't decided one way or the other, so write to Champion of Chamblee, 5620 Peachtree Rd., Chamblee, Ga. 30005 and help 'em make up their minds.

TABLE TOP RACEWAY CONTEST.

This month's winner is Michael J. Harris of 49 Townsend Ave., Norwalk, Ohio 44857. Mike shot the works detailing this beautiful track and really deserves the MC&S subscription.

NEW STUFF DEPT Aurora has quite a few new Cigarbox bodies and a new car out. The new car is a Willys Gasser drag car and the bodies include six-count 'em—Formula Ones (Lola-Ford,

continued on page 74

MC&S CLUB LISTING

Fill out this information sheet and mail it to us as soon as possible. We'll list your club in our MC&S Club Listing, which appears in each issue of MC&S. If you're looking for more fun and competition, let other clubs know where you're at. Make it a point to contact the clubs closest to you, and get that competition started. **DO IT NOW!**

Please print

Club name _____

City _____ State _____ Zip _____

Telephone area code _____ number _____

Is this a new club? Yes No

If "No" how long has your club been in existence? _____ Years _____ Months

How many members? _____

Do you have a minimum age for members? _____

Looking for new members? Yes No

Looking for competition from other clubs? Yes No

Average age of your members _____ years old

How many tracks in your club? _____

Custom made tracks? (routed) Yes No

Tracks made from commercial track? (Revell, Monogram, etc.) Yes No

Is your club affiliated with NAMRA? (1/24 & 1/32) Yes No

Is your club affiliated with HOCCI? (HO scale) Yes No

If "yes" do you follow the NAMRA or HOCCI rules closely? Yes No

Which scales do you race? 1/24 1/32 HO

Do you race Ready-to-runs Kit cars Scratchbuilt

How often does your club race? _____

Any special night(s) of the week? _____

Do any of your members subscribe to MC&S? Yes No

Buy it on the newsstands? Yes No

Thank you. Your club will be listed approximately 60 days from today, or less.

Southern Sampling



by FLOYD MANLY

Every so often I get a case of the "Blahs." The symptoms are exactly the same as spring fever—I get a catch in my getalong—and I don't want to do *anything*! Like a big brown bear fat full of berries, I'd rather flop in the sun and watch the world go by. Not even slot cars interest me . . . then the friendly mail man drops a box of goodies, and I'm up and around like a buck in the mating season.

Yesterday Bob Rule sent me a pair of Jack Lane's new Champion chassis. These have the solid brass drag arms. The best I can say is that the way their 517 motor has made rewinding an obsolete task, these new chassis make scratch building obsolete! The design is what you once had to pay Bob Cozine to build for you. In fact Cozine *did* design it. Lane put the high quality Champion production touches to it and came up with a frame second to none. The only thing missing is the flexy body mounts. This is a custom individual feature that's better if added by the racer. About an hours work.

Bob Parks is putting them on a Stocker for the Atlanta Arcos, coming up.

With *all* production products you need to do a little tuning up before you can expect maximum performance. First, set up the frame in a jig, or on a flat surface with axles and "setup" wheels installed. Don't know how to make "setup" wheels? Shame! Use some old sidewinder gears. To get 1/16" clearance under the chassis (for 3/4" fronts and 7/8" rears) use gears ground down to 5/8" and 3/4" respectively. Make up a pair and hang on to them. They're great for straightening a "pranged" frame, too.

Back to chassis tuning. Now take a new axle, and using plenty of oil (3 in 1 household oil is great), spin it in the axle tube and rear oilites with a power drill. Clean everything up with lighter fluid or plain kitchen sink detergent and hot water. Install the wheels and axles, and spin. You should get a 4-5 second coast-down. Anything less, and something is wrong'

Have you tried Cox's new Mark 5A controller? This one is the closest thing to a custom pro goodie you can get. The mechanics of it are beautiful! The sliding tube principal is a modification the pros have been using for quite a while. Cox is first with it. There are a couple other mods you could incorporate to make it "full house" but for the price you pay you'll be happy!

True "thingie lovers" will love John Chotin's "Choti Specials." These West Coast bodies create two types of reactions the first time they're seen. "Wow" or "Yuk." John designed these for maxi performance and mini looks. Most of them are shaped like a wedge of chocolate cake laid on its side. The wheels are covered and the whole back end is missing. A slot car moving round the track creates a breeze and the Choti bodies use this breeze to hold the wheels to the track. The ski slope shape exerts downward pressure. The faster the car is moving, the more pressure. This type of body is best with the spider web weight chassis, but definitely helps the handling of even our 5-1/2 oz. sleds. John sent me a sample car made of 1/16" stainless steel tubing. It had 1/4" (Yeh—one fourth) front wheels, and a Lenz "Boss" motor. The Thingie weighed 2-1/2 oz. and when the button was punched, it disappeared faster than a mule backing into a barb wire fence. Man, it moved! Until I blinked at the wrong time! The car hit the hay bales. That ended it! You'da thought I beat it with a big stick. That 1-1/2 motor just flat *hurt* that 1/2 oz. frame. Those spider frames are built for better drivers than me! The Lenz "Boss" was run a couple more times but a bent frame overheated it, and it coughed.

Say what you want, but for sheer speed and excitement the "Thingie" is the thing! I hate to admit that I've gone over to scale or even near-scale, but I have. With most tracks adopting rules that are pretty much standard (you know, clearance, wheel

size, driver, decal, and body style) I've had to! The fun is still there when everybody follows the rules, but all it takes is one guy to protest (like me) when somebody ignores a rule and a lot of the fun is lost. A rule is a rule and every car should follow the rule. My car is legal, but if *one* car is allowed to run out aw — let's *all* run "open" class.

Uncomplicated, no fuss, no mess, no bother! Run-what-ya-brung Zero. The lap counter, turn on the power and let's go! No "track" calls, no lap adjustments, no cussing! First car to register X number of laps wins. During lane changes you have exactly 2 minutes (or 1 minute, or 3 seconds) to change your controller, tape and car, the power is coming back on, regardless! If you have any repairs to do — do 'em when you can. Nobody screaming — everybody having fun! What's wrong with that?

Nobody is in this sport for the money — it's for fun. The less restraints there are, the more fun for the novice. I'm far from a novice and I enjoy myself in every race. Last Sunday we scratched up a track full of cars and staged an "open" race. I loaned 2 cars out and ran one myself. An 11 year old kid that just *can't* build a car beat me and the whole field by 46 laps after an hour of running! "Frog" has the reflexes and common sense to be a top driver, but he doesn't have the mechanical ability to build a competitive car. *He* had a ball, *I* had a ball trying to catch him and watching his car being driven the way it should be. We all had fun. First prize was \$3.00! More and more Open "Thingie" races!





By Tom Malone

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THE TECH SHEET

Recently I was called in by a company to figure out why some gyros were not performing correctly. These were expensive instruments with Class 3 ball bearings and balanced down to a "flea's whisker," or so the manufacturer thought. Essentially, the heart of a gyro is a weighted drum or flywheel which is spinning extremely fast, so in some characteristics it is not wholly unlike our motor's armatures, though their functions differ.

The trouble with these gyros was that many were erratic and would not come up to the rated 63,500 rpm.

What's all this got to do with slot cars, you ask? Well, many of the same problems exist here that exist in our slot cars, so I began to do a little testing.

Many readers who have been around a while remember seeing pictures of balancing machines. Pete Hagenbuck showed the balancing equipment used at Dyna Rewind some months back. Most dynamic balancing performed by commercial rewinders is done by placing a belt or pulley over the armature and over a motor's pulley so that the armature can be spun up to balancing speed while a strobe light blinks on and off at a rate synchronous to the armature's speed. This "freezes" the action so that the armature appears to be standing still or motionless. The amount of unbalance is registered on a meter where a low reading near zero indicates a well-balanced part and a high reading indicates the armature or part is in a state of great unbalance.

This same procedure was followed with the gyro but what went unnoticed by the balancing machine's operator was that when the gyros got down to a low meter reading, showing the part was partly well balanced, the pointer on the dial would weave back and forth slightly.

I decided to try a different method of balancing. I placed the gyro in "Vee blocks" and spun the drum up to balancing speed by a blast of high pressure air. The amount of unbalance was recorded on a large graph with a pinpoint of light to indicate where and how much unbalance was present. Thus we eliminated the outside damping forces of the belt or pulley and the part was left to spin on its ball bearings. Under these

conditions, if the gyro was balanced, the dot of light would be close to the center of the graph and if unbalanced it would be near the outside some place. The gyro in this set-up acted true to form. The little dot of light was about half-way out on the graph but it made a small slow circular pattern on one side of the graph. This could be described as looking much like our moon orbiting around the earth, while the earth orbited around the sun which would be represented as the center of the round graph. Graphically we were seeing the combination of internal sloppiness inside the bearing itself and a dragging effect on the balls caused by dirt or misalignment inside the bearing. So I changed the bearing to completely enclosed shielded bearings and substituted a better bearing and the problem was solved. Now the gyros stay balanced and run fine where before, every time they were balanced, they would show a different place as being the point of unbalance.

In looking for a different bearing I talked to bearing representatives and they generally look upon any Class 3 or 5 miniature ball bearing as having a top speed of 40,000 rpm and anything over 50,000 as being excessive regardless of the amount of side loading pressures. The higher the amount of side pressure the shorter the bearing's "useful life." They classify a pivot bearing (even a high quality one) as 20,000 rpm tops when it has $\frac{1}{8}$ " O.D. and only 12,000 rpm as the top rated speed when it has $\frac{1}{4}$ " O.D. (A pivot bearing is one similar to the ones found on the D26's and newer Mabuchi.)

It is interesting to note that all of the American ball bearing motors do not exceed 50,000 rpm by much. The Versitec SS 91 is 15 dollars and has 40,000 rpm, the SS .01 is 10 dollars and has 50,000 to 53,000 rpm free running; and the Pittman can 6001 is 10 dollars and has 36,000 to 40,000 rpm free running. In each case these motors are made by companies that specialize in making motors and each uses a thick case. Strong magnets develop good torque so they are usually geared higher and each has a $\frac{1}{2}$ " shaft or larger shaft. (Globe's being $\frac{1}{4}$ " except for the new ones having a cut down step for an 0.078" pinion on the SS 101's but the bearing is still $\frac{1}{8}$ " by $\frac{1}{4}$ ".)

What the bearing reps are saying is quite true, that 50,000 rpm is tops for ball bearings and they must be kept clean with side loading pressure

kept to a minimum. I've had Class 3 ball bearings scatter themselves all over a track because of dirt getting into the bearing races and around the balls.

I decided to do some testing. I took an armature and had it balanced dynamically as close to perfect as we could get it. Then I modified the comm slightly after truing and polishing so it would produce a minimum of "brush bounce." Then I contoured the brushes so they would give a minimum of bounce and used weak springs.

I set this up in a motor first with good quality ball bearings (Veritec's) then with regular Mabuchi pivot bearing on both ends, and finally with plain oilites. I used the same balancing machine I used for the gyros with the dot of light on a circular graph. The way this machine works, it has 6 scales or ranges (1, 2, 5, 10, 20, and 50) with the lowest range of 1 being the most sensitive and 50 being the least sensitive with the center of the graph indicating the best balance for each range used. You might describe the circular graph as a rifle target with a bullseye in the center. If you're near the bullseye your part is balanced.

The armature was balanced down to the center of the first range. When installed in a motor with ball bearings and the current turned on while the motor case is strapped to the balancer, it registered midway in the second range. Granted, part of this could be due to the comm and brush but midway in the second range is a pretty small vibration.

Next, I set the same armature in a case using Mabuchi pivot bearings on each end. I couldn't keep the motor from going all over the twentieth range and you could actually feel the vibration. I put my finger gently against the shaft and so duplicated a side pressure that a crown gear might exert against a pinion but without the added vibration produced by the meshing of the gear's teeth. Under these conditions the lowest I could get was about mid-range to the outside of the tenth range. That's more than ten times the vibration or unbalancing than the original armature by itself.

Next, I tried plain bearings on both ends with a Simco bearing in the endbell and a Champion oilite in the case. This produced a reading between the center to middle of the fifth range. This figure will vary depending on the fit between the bearing and the shaft.

Now all this discussion looks pretty bad for the pivot bearings but let's put this in its proper perspective. The Pittman can sell for \$4.50 with oilites and 10 dollars with ball bearings and these are of the shielded type. The Globe 101 sells for 10 dollars and the 91 for \$15.00 equipped with similar shielded bearings.

Now a Mabuchi motor uses pivot bearings but they sell for 3 dollars a piece and the newer 16D uses a plain oilite on the pinion end of the shaft. The D-26 used pivots on both ends but keep in mind a couple of factors about these motors. In stock form both have a free running rpm around 40,000 and the side load pressure, if set up correctly, is in ounces so the speed factor could easily be doubled or—stretching a point—may be a little more than doubled.

A look at a "typical" average 26-D cranking out say 41,000 rpm free running on 12 volts with .5 amps draws with an unbalanced armature and pivot bearings on each end. Installed in a car with, say, 8 to 31 gearing it turns the rear 1" wheels at 7,800 rpm with 1 1/4 amps or about 30,260 rpm at the pinion when going wide open on a straight-away. This works out to be about 34 feet per second. These figures were obtained under carefully conducted tests using a Classic Gamma Ray R.T.R. car. This, as I said, was a toy 3 dollar motor and we aren't too far off out from our double plus a little over 12,000 rpm pivot bearing top rated speed level.

It doesn't take an 8 or 10 thousand dollar balancer to tell these motors vibrate; you can feel it when held in your hand. When a rewind is used, say a double 29, the rpm can be between 72 and 76,000 rpm and this presents a real problem. Here plain oilite or American ball bearings should be used as our tests indicated. This 72,000 rpm figure is a fair average if there is such a thing, as I've tested some U-Go at 87,500 and Rx advertised 100,000 rpm and it might be true, although I've never tested one to check its rpm.

Oilites would be cheaper and you can use Simco's in the endbell as I did on the smaller Mabuchi's or Champion flanged oilites on D-26 or in their endbells. I would suggest prior to installing the Champion oilites that you rub them across a flat, fine toothed file then fine sandpaper until the side next to the armature is perfectly flat and smooth. When you buy the bearing you will notice

there is a small cone or depression surrounding the hole and small spacers or washers can become wedged and break in this depression and fly all over the inside of the motor, breaking the windings. I saw this happen just the other night.

This takes care of the Mabuchi motors but the Hemi's and Champion's present another problem. The Hemi cans vibrate because the inside flange is often rough and uneven and the bearing is allowed to rock back and forth in the case. I would recommend here to replace with Champion's oilite after modifying as mentioned before and epoxy them to the case. In the Champion 517 cases the aluminum bearing housing often becomes loose so you should epoxy this well all around the outside of the housing.

I usually make one more modification to these oilites and that is, I make an oil or grease reservoir by using about a #60 drill and making a hole perpendicular to the shaft's hole to run from the top of the bearing to the shaft hole. Yes, I said grease or heavy oil. You must use a lubricant with enough body to it so it will not "boil" out when the motor is hot and allow the bearing to run "dry." Heavy oil, Lubriplate, Gun Slick (for rifles, etc.) and S.T.P. make good bearing lubricants.

I want to clarify my figures for the Stock 26-D with 7,800 rpm at the rear wheels. The figure is true but many double 29 motors have just over 8,000 rpm and are going somewhere between 38 and 42 feet per second, and they *outrun* the stock 26-D. The explanation for this is the double 29 is geared 7-29 to 7-31 and it has *more torque* so it hits *top rpm* quicker than the 26-D.

This is a subject for another article as to how to get the torque and rpms.

Now to get back to building a couple of static kits one of which is an armored car I'm converting into a slot car just for kicks. Speed is not important on this car. This might come as a shock and be a great surprise to many people, but I build more static models than slot cars because I was a dyed-in-the-wool modeller long before slots ever appeared. I build all kinds of kits from cars, buses, boats, trains, airplanes and tanks. I even started the Lord Mayor of London's static coach complete with horses. I am the epitome of the statement that a *true modeller* enjoys his hobby regardless of scale, subject matter, materials or techniques involved.

Ferrari, Cooper-Maserati, Lotus-Ford, Honda, and BRM), a Firebird, the Willys Gasser, and a Cheetah. I haven't seen any of these yet so I don't know if they will fit the T-Jet or not, but I've got my fingers crossed. There are also some heavy road-construction machines in the new line-up, but I daan't say anything nasty about them for fear of arousing the wrath of some guy who likes to race bulldozers.

Mini Wheels Slot Racing Products, 714 Raritan Avenue, Highland Park, New Jersey 08904 has two new CP bodies out (a Chaparral 2-F and the long-awaited STP Turbocar) and two new sets of tires called "GO Tires". President Tag Powell was nice enough to send me samples of everything (including the "old" Little Red Wagon and Ford GT). The turbocar is beautiful. Detail of all the bodies, however, is vague, but even Lancer falls short in that department. The wagon is without a doubt the worst; the detail is so bad that you can't even see the wheel wells. The other three are much better, especially the STP whooshmobile. All the bodies cost .49.

The tires come in two sizes, one small .39 pair for stock wheels and one large hop-up pair for .49. They seem to go well enough, my one gripe being that they are white.

While on the subject of Mini Wheels, I would like to apologize to Mr. Powell for a couple of mistakes contained in my first column. It seems that Mini Wheels were out with the Little Red Wagon before Tyco, and that their first bodies were *not* pre-painted but molded in *red translucent plastic*. They have since switched over to *clear plastic*.

AJ's has a new tire called Dispersion X. It's a silicone-coated sponge and it should out-perform both regular siliies and sponges (at least in theory it should because it combines the best qualities of both.) I haven't seen a pair yet, so I'll reserve judgement (the theories often fall through when applied to HO).

It looks like Tyco is still alive and kicking. They have a new '68 Corvette and a banked-curve section of track. The banked curve comes with a set of adaptors so that it can be used with Aurora track.

Lindberg (Who?) has a new line-up of HO collector's cars (a la "MATCH-BOX" and Cigarbox) including a .39 Porsche Carrera 6' which might be adaptable to HO racing.

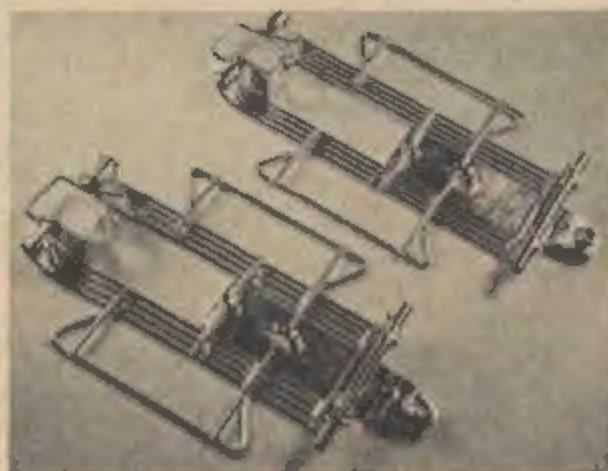
MANUFACTURERS TAKE NOTE: Since it looks like we're going to be stuck with it a while, how about a gear-puller and a rewinder for the T-Jet?

In body styles, how about some NASCAR stockers (Montego, Torino, Charger, Roadrunner), the Howmet Turbine, Porsche 907 and 910, Alfa-Romeo T33, Javelin, '68 Mustang, Ford F3L and the '67 Can-Am cars.

I've been just notified by HOCCL of my appointment as Texas Regional Director. I would appreciate it immensely if all Texas members would take a few minutes to write and outline the amount of HO racing done in your locale, the tracks, the racers, and just the overall local HO scene. As Jose Rodriguez told me recently, I need to know "who is where with what."

That's about it. Until next month, keep those letters coming in and don't dice with those super-hot Batmobiles.

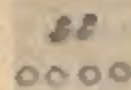
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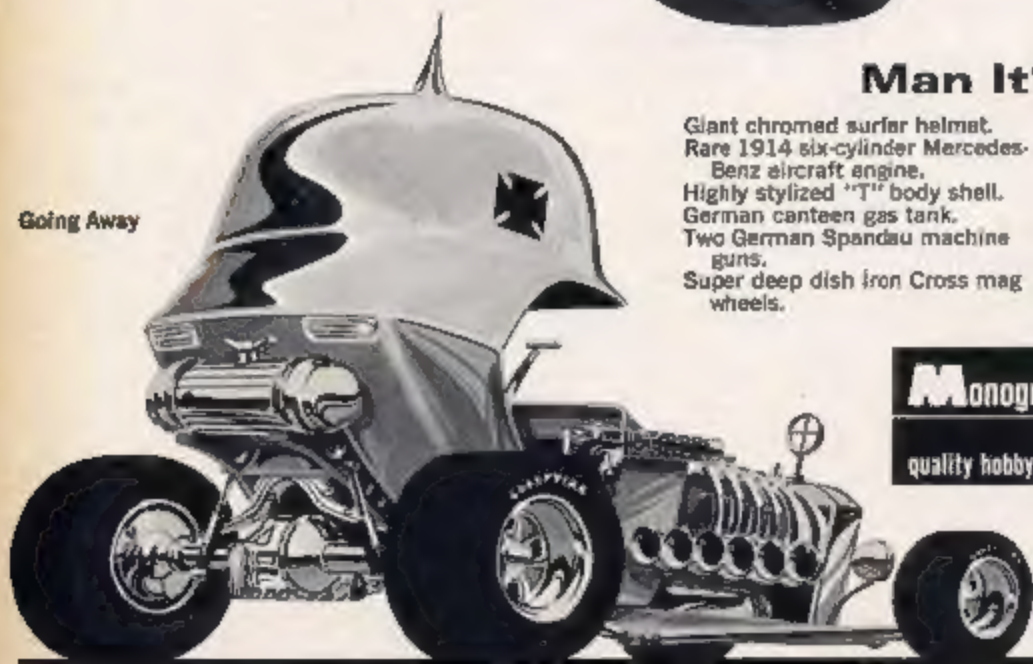
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